DARLING INGREDIENTS INC.

2019 Annual Report

DAR PRO INGREDIENTS Bakery Feeds Nature Safe ecoson Rousselot Peptan ROTHSAY DAR PRO SOLUTIONS hepac LARU cth Rendac DIAMOND GREEN DIESEL sonac DAR PRO BIOENERGY ENVIROFLIGHT

Please visit our Investor section of the website (www.darlingii.com) to view the 2019 interactive annual report and shareholder letter.

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, DC 20549

FORM 10-K

(Mark One)

☒ ANNUAL REPORT PURSUANT TO SECTION 13 or 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 28, 2019

OR

☐ TRANSITION REPORT PURSUANT TO SECTION 13 or 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from _______ to _______

Commission File Number 001-13323

DARLING INGREDIENTS INC.

(Exact name of registrant as specified in its charter)

Delaware	**36-2495346**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification Number)
5601 N MacArthur Blvd., Irving, Texas	**75038**
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number, including area code: **(972) 717-0300**

Securities registered pursuant to Section 12(b) of the Act:

Title of Each Class	Trading Symbol(s)	Name of Exchange on Which Registered
Common Stock $0.01 par value per share	DAR	New York Stock Exchange (“NYSE”)

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the Registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☒ No ☐

Indicate by check mark if the Registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☒

Indicate by check mark whether the Registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the Registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the Registrant was required to submit files). Yes ☒ No ☐

Indicate by check mark whether the Registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	☒	Accelerated filer	☐
Non-accelerated filer	☐	Smaller reporting company	☐
		Emerging growth company	☐

If an emerging growth company, indicate by check mark if the Registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of Exchange Act. ☐

Indicate by check mark whether the Registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

As of the last day of the Registrant's most recently completed second fiscal quarter, the aggregate market value of the shares of common stock held by nonaffiliates of the Registrant was approximately $3,236,648,000 based upon the closing price of the common stock as reported on the NYSE on that day. (In determining the market value of the Registrant's common stock held by non-affiliates, shares of common stock beneficially owned by directors, officers and holders of more than 10% of the Registrant's common stock have been excluded. This determination of affiliate status is not necessarily a conclusive determination for other purposes.)

There were 163,921,741 shares of common stock, $0.01 par value, outstanding at February 19, 2020.

DOCUMENTS INCORPORATED BY REFERENCE

Selected designated portions of the Registrant's definitive Proxy Statement in connection with the Registrant's 2020 Annual Meeting of stockholders are incorporated by reference into Part III of this Annual Report.

DARLING INGREDIENTS INC. AND SUBSIDIARIES
FORM 10-K FOR THE FISCAL YEAR ENDED DECEMBER 28, 2019

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PART I

ITEM 1. BUSINESS

GENERAL

Founded by the Swift meat packing interests and the Darling family in 1882, Darling Ingredients Inc. (“Darling”, and together with its subsidiaries, the “Company” or “we,” “us” or “our”) was incorporated in Delaware in 1962 under the name “Darling-Delaware Company, Inc.” Darling changed its name from “Darling-Delaware Company, Inc.” to “Darling International Inc.” on December 28, 1993, and from “Darling International Inc.” to “Darling Ingredients Inc.” on May 6, 2014. The address of Darling's principal executive office is 5601 N MacArthur Boulevard, Irving, Texas, 75038, and its telephone number at this address is (972) 717-0300.

OVERVIEW

We are a global developer and producer of sustainable natural ingredients from edible and inedible bio-nutrients, creating a wide range of ingredients and customized specialty solutions for customers in the pharmaceutical, food, pet food, feed, industrial, fuel, bioenergy and fertilizer industries. With operations on five continents, the Company collects and transforms all aspects of animal by-product streams into useable and specialty ingredients, such as collagen, edible fats, feed-grade fats, animal proteins and meals, plasma, pet food ingredients, organic fertilizers, yellow grease, fuel feedstocks, green energy, natural casings and hides. The Company also recovers and converts recycled oils (used cooking oil and animal fats) into valuable feed and fuel ingredients, and collects and processes residual bakery products into feed ingredients. In addition, the Company provides environmental services, such as grease trap collection and disposal services to food service establishments. In fiscal year 2019, the Company generated $3.4 billion in revenues and $312.6 million in net income attributable to Darling.

North America

We are a leading provider of animal by-product processing, used cooking oil and bakery residual recycling and recovery solutions to the U.S. food industry. We operate over 135 processing and transfer facilities in the United States to produce finished products such as protein (primarily meat and bone meal (“MBM”) and poultry meal (“PM”)), meat products for the pet food industry, blood products (plasma and whole blood), collagen, fats (primarily bleachable fancy tallow (“BFT”), poultry grease (“PG”) and yellow grease (“YG”)), bakery by-products (“BBP”) and hides, as well as a range of branded and value-added products. Darling sells these products in North America and throughout the world, primarily to producers of animal feed, pet food, biodiesel, fertilizer and other consumer and industrial ingredients, including oleo-chemicals, soaps and leather goods, for use as ingredients in their products or for further processing. In the United States, Darling operates a biodiesel facility and is a partner with Valero Energy Corporation in Diamond Green Diesel, a renewable diesel facility, both of which convert used cooking oils and animal fats into valuable biofuel products. In Canada, the Company operates under the name Rothsay, which is a leading recycler of animal by-products and producer of biodiesel. Rothsay processes raw materials into finished fat and protein products for use in animal feed, pet food, biodiesel, fertilizer and other ingredients and manufactures biodiesel for domestic and international markets. Rothsay has a network of five rendering plants in Manitoba, Ontario and Nova Scotia and a biodiesel operation in Quebec.

Europe, China, Australia and South America

Darling Ingredients International, our subsidiary, is a worldwide leader in the development and production of specialty ingredients from animal by-products for applications in animal feed, pet food, fuel, bioenergy, fertilizer, food and pharmaceuticals. Darling Ingredients International operates a global network of 63 production facilities across five continents covering all aspects of animal by-product processing through five brands: Rendac (fuel), Sonac (proteins, fats, edible fats and blood products), Ecoson (bioenergy and fertilizer), Rousselot (collagen) and CTH (natural casings). Darling Ingredients International's specialized portfolio of over 320 products covers all animal origin raw material types and thereby offers a comprehensive, single source solution for suppliers. Darling Ingredients International’s rendering and specialties business has leading positions across Europe and China, with European operations in the Netherlands, Belgium, Germany, Poland and Italy under the Ecoson, Rendac and Sonac brand names. Value-added products include edible fats, blood products, bone products, protein meals and fats. Rousselot is a global leading market provider of collagen for the food, pharmaceutical and technical industries with operations in Europe, the United States, South America and China. CTH is a leading natural casings company for the sausage industry with operations in Europe, China and the United States.

Operating Segments

The Company's business operates within three reportable operating segments: Feed Ingredients, Food Ingredients and Fuel Ingredients.

The Feed Ingredients operating segment includes the Company's global activities related to (i) the collection and processing of beef, poultry and pork animal by-products in North America and Europe into non-food grade oils and protein meals, (ii) the collection and processing of bakery residuals in North America into Cookie Meal®, which is predominantly used in poultry and swine rations, (iii) the collection and processing of used cooking oil in North America into non-food grade fats, (iv) the collection and processing of porcine and bovine blood in China, Europe, North America and Australia into blood plasma powder and hemoglobin, (v) the processing of selected portions of slaughtered animals into a variety of meat products for use in pet food in Europe and North America, (vi) the processing of cattle hides and hog skins in North America, (vii) the production of organic fertilizers using protein produced from the Company’s animal by-products processing activities in North America and Europe, (viii) the rearing and processing of black soldier fly larvae into specialty proteins for use in animal feed and pet food in North America; and (ix) the provision of grease trap services to food service establishments in North America. Non-food grade oils and fats produced and marketed by the Company are principally sold to third parties to be used as ingredients in animal feed and pet food, as an ingredient for the production of biodiesel and renewable diesel, or to the oleo-chemical industry to be used as an ingredient in a wide variety of industrial applications. Protein meals, blood plasma powder and hemoglobin produced and marketed by the Company are sold to third parties to be used as ingredients in animal feed, pet food and aquaculture.

The Food Ingredients operating segment includes the Company's global activities related to (i) the purchase and processing of beef and pork bone chips, beef hides, pig skins, and fish skins into collagen in Europe, China, South America and North America, (ii) the collection and processing of porcine and bovine intestines into natural casings in Europe, China and North America, (iii) the extraction and processing of porcine mucosa into crude heparin in Europe, (iv) the collection and refining of animal fat into food grade fat in Europe, and (v) the processing of bones to bone chips for the collagen industry and bone ash in Europe. Collagens produced and marketed by the Company are sold to third parties to be used as ingredients in the pharmaceutical, nutriceutical, food, pet food, and technical (e.g., photographic) industries. Natural casings produced and marketed by the Company are sold to third parties to be used as an ingredient in the production of sausages and other similar food products.

The Fuel Ingredients operating segment includes the Company's global activities related to (i) the Company’s share of the results of its equity investment in Diamond Green Diesel Holdings LLC, a joint venture with Valero Energy Corporation (“Valero”) to convert animal fats, recycled greases, used cooking oil, inedible corn oil, soybean oil, or other feedstocks that become economically and commercially viable into renewable diesel (the “DGD Joint Venture”) as described in Note 2 to the Company's Consolidated Financial Statements for the period ended December 28, 2019 included herein, (ii) the conversion of animal fats and recycled greases into biodiesel in North America, (iii) the conversion of organic sludge and food waste into biogas in Europe, (iv) the collection and conversion of fallen stock and certain animal by-products pursuant to applicable EU regulations into low-grade energy sources to be used in industrial applications in Europe, and (v) the processing of manure into natural bio-phosphate in Europe.

For financial information about our operating segments and geographic areas, refer to Note 21 and Note 22 to the Company's Consolidated Financial Statements for the period ended December 28, 2019 included herein.

Fiscal Year 2019 Net External Sales

Darling’s net external sales from fiscal year 2019 continuing operations by operating segment were as follows (in thousands):

	Fiscal Year 2019		Fiscal Year 2018		Fiscal Year 2017	
Net sales:						
Feed Ingredients	$ 1,970,561	58.6%	$ 1,952,555	57.7%	$ 2,239,492	61.1%
Food Ingredients	1,119,085	33.3	1,139,126	33.6	1,156,976	31.6
Fuel Ingredients	274,259	8.1	296,045	8.7	265,783	7.3
Total	$ 3,363,905	100.0%	$ 3,387,726	100.0%	$ 3,662,251	100.0%

OPERATIONS

Feed Ingredients Segment

Our Feed Ingredients segment consists principally of (i) our U.S. ingredients business, including our fats and proteins, used cooking oil, and trap grease collection business, the Rothsay ingredients business, and the ingredients and specialty products businesses conducted by Darling Ingredients International under the Sonac name (proteins, fats and plasma products) and (ii) our bakery residuals business.

Animal By-Products

North American Operations

Raw materials: The Company's North American animal by-products operations collect beef, poultry and pork by-products, which are collected primarily from slaughterhouses, grocery stores, butcher shops and food service establishments. These raw materials are collected in one of two manners. Certain large suppliers, such as large slaughterhouses, are furnished with bulk containers in which the raw material is loaded. We provide the remaining suppliers, primarily grocery stores and butcher shops, with containers in which to deposit the raw material. The containers are picked up by, or emptied into, the Company's trucks on a periodic basis. The type and frequency of service is determined by individual supplier requirements, the volume of raw material generated by the supplier, supplier location and weather, among other factors. The raw materials we collect are transported either directly to a processing plant or to a transfer station where materials from several collection routes are loaded into trailers and transported to a processing plant. These raw materials are delivered to plants for processing usually within 24 hours of collection to deter spoilage.

Processing operations: We produce finished products primarily through the grinding, cooking, separating, drying, and blending of various raw materials. The process starts with the collection of animal by-products, including fat, bones, feathers, offal and other animal by-products. The animal by-products are ground and heated to evaporate water and separate fats from animal tissue, as well as to sterilize and make the material suitable as an ingredient for animal feed. The separated fats, tallows and greases are then centrifuged and/or refined for purity. The remaining solid product is pressed to remove additional oils to create protein meals. The protein meal is then sifted through screens and ground further if necessary to produce an appropriately sized protein meal. The primary finished products derived from the processing of animal by-products are MBM, PM (both feed grade and pet food), PG, tallow, feather meal and blood meal. In addition, at certain of our facilities, we are able to operate multiple process lines simultaneously, which provides us with the flexibility and capacity to manufacture a line of premium and value-added products in addition to our principal finished products. Because of these processing controls, we are able to produce premium products that typically have higher protein and energy content and lower moisture than standard finished products, and such products command premium prices.

International Operations

Darling Ingredients International's ingredients and specialty products businesses are operated under the Sonac name by our Sonac C3 and Sonac Blood business activities. The Sonac ingredients and specialty products businesses of Darling Ingredients International operate similarly to our North American ingredients division. However, the Sonac businesses, with the exception of Sonac C3, further separate raw material streams to add additional value to each stream.

Sonac C3 processes animal by-products collected primarily from slaughterhouses, into proteins and fats for applications used in the pet food, feed, technical, biofuels and oleo-chemical markets. Oleo-chemical producers use fats to produce specialty ingredients used in paint, rubber, paper, concrete, plastics and a variety of other consumer and industrial products.

Sonac Blood processes bovine, porcine and ovine blood by separating blood into plasma and hemoglobin and produces specialized end products for application in the feed and pet food markets. Sonac Blood's end products include plasma, fibrimex, globin and hemin.

Used Cooking Oil

The Company is a leading collector and processor of used cooking oil in North America for use as a valuable low carbon fuel and feed ingredient. The Company estimates it collects used cooking oil from approximately 120,000 locations. The Company's primary customer for this product is the DGD Joint Venture.

Raw materials: Used cooking oil is collected from restaurants, food service establishments and grocery stores. Many of our suppliers operate stores that are part of national chains. Used cooking oil is placed in various sizes and types of containers supplied to the Company under mutually agreeable contract terms. In some instances, these containers are unloaded directly onto our trucks, while in other instances used cooking oil is pumped through a vacuum hose into the truck. We provide several types of containers for used cooking oil collection to food service establishments, which are proprietary self-contained collection systems that are housed either inside or outside the establishment, with the used cooking oil pumped directly into collection vehicles via an outside valve. The frequency of all forms of used cooking oil collection is determined by the volume of oil generated by the restaurant, food service establishment or grocery store.

Processing operations: The used cooking oil we collect is heated, settled, and purified for use as a feedstock for biofuels or as an ingredient for animal feed.

Bakery Residuals

The Company is a leading processor of bakery residuals in the United States. The bakery residuals division, which operates solely in the United States, collects bakery residual materials and processes the raw materials into BBP, including Cookie Meal®, an animal feed ingredient primarily used in poultry and swine rations.

Raw materials: Bakery residuals are collected from large commercial bakeries that produce a variety of products, including cookies, crackers, cereal, bread, dough, potato chips, pretzels, sweet goods and biscuits. The Company collects these materials by bulk loading onsite at the bakeries utilizing proprietary equipment, the majority of which is designed, engineered, manufactured and installed by us. All of the bakery residuals that the Company collects is bulk loaded, which we believe represents a significant advantage over competitors that receive a large percentage of raw materials from less efficient, manual methods. The receipt of bulk-loaded bakery residuals allows us to significantly streamline our bakery recycling process, reduce personnel costs, and maximize freight savings by hauling more tons per load.

Processing operations: The highly automated bakery residuals production process involves sorting and separating raw material, mixing it to produce the appropriate nutritional content, drying it to reduce excess moisture, and grinding it to the consistency of animal feed. During the bakery residuals process, packaging materials are removed. The packaging material is fed into a combustion chamber along with sawdust, and heat is produced. This heat is used in the dryers to remove moisture from the raw materials that have been partially ground. Finally, the dried meal is ground to the specified granularity. The finished product, which is continually tested to ensure that the caloric and nutrient contents meet specifications, is a nutritious additive used in animal feed.

Other Products/Services

Our Feed Ingredients segment also includes the Company's organic fertilizer business conducted under the Nature Safe® name, insect protein business conducted under the EnviroFlight® name, hides businesses and grease trap services business.

- Our fertilizer operations utilize finished products from our animal by-products division to manufacture organic fertilizers from ingredients approved by the U.S. Department of Agriculture ("USDA") to be used in organic farming which contain no waste by-products (i.e., sludge or sewage waste). The Company's North American fertilizer products are predominantly sold to golf courses, sports facilities, organic farms and landscaping companies.

- Our EnviroFlight business utilizes technologies which enable the rearing of non-pathogenic black soldier fly larvae, which larvae are then processed to produce specialty protein for use as an ingredient in animal feed and pet food.

- Our hides operations process hides and skins from beef and hog processors, respectively, into outputs used in commercial applications, such as the leather industry. We sell treated hides and skins to external customers, the majority of which are tanneries. Fresh and salted hides and fresh skins are sold to tanneries, automotive companies, leather processors and to the shoe and furniture industries in Italy, Germany and China.

- Our grease trap services business provides our customers with a comprehensive set of solutions to their trap grease disposal needs, including manifests for regulatory compliance, computerized routing for consistent cleaning and comprehensive trap cleaning. The trap grease we collect is transported to waste treatment centers.

Food Ingredients Segment

Our Food Ingredients segment consists principally of (i) the collagen business conducted by Darling Ingredients International under the Rousselot name, (ii) the natural casings and meat by-products business conducted by Darling Ingredients International under the CTH name and (iii) certain specialty products businesses conducted by Darling Ingredients International under the Sonac name.

Collagen

Rousselot is a global leading market provider of collagen for the food, nutritional pharmaceutical and technical (e.g., photographic) industries with operations in Europe, China, South America and the United States. Rousselot has a network of 11 production plants and 6 sales locations, covering sales into more than 75 countries. With the Rousselot collagen business, the Company is part of the growing global collagen market. Collagen is a functional ingredient, which means that it has a role in the end product by adding a critical property to it that is largely non-substitutable. Collagen is used in a large variety of end products, but only small amounts are used in most products. Currently, available substitutes are limited and do not have the broad functionality required for most usages. Rousselot collagen products have higher sales prices relative to the Company's other end products, but comprise a minimal portion of the cost of final products in many segments, for example the pharmaceutical end markets. We believe many end customers focus on collagen quality and consistency, supply reliability, application know-how and regulatory support and are therefore relatively less price sensitive to collagen products. Rousselot's profitability is mainly driven by its ability to timely transfer increases in net raw materials costs to its customers in order to realize a relatively stable added value per kilogram of collagen, in combination with a strong focus on operations excellence and product quality. Rousselot is involved in all four types of collagen (pigskin, hide, bone and fish). Raw material prices are mainly driven by the availability and quality of raw material, and sales prices are mainly driven by market demand and the expected availability of collagen supply. As such, securing sufficient raw material positions is key to the business. Rousselot enters into formal arrangements related to raw material purchases that differ by raw material type, by duration and by regional area. Rousselot markets its hydrolyzed collagen under the "Peptan" brand; this fast-growing specialty ingredient is positioned specifically towards nutritional supplement customers focusing on improved bone, joint and skin health.

Other Specialty Products

In addition, our Food Ingredients segment includes the Sonac bone, heparin and edible fat businesses currently operated by Darling Ingredients International under the Sonac name:

- Sonac Fat primarily melts, refines and packages animal fat into food grade fat for the food markets.
- Sonac Bone processes porcine bones into fat, bone protein, glue, bone ash and bone chips for the feed, pet food, food and collagen industries.
- Sonac Heparin extracts crude heparin from hydrolyzed mucosa for application in the pharmaceutical industry.

Natural Casings and Meat By-Products

The CTH business of Darling Ingredients International is a leading natural casings company for the sausage business with operations in Europe, China and the United States. The activities of this business are divided into two categories:

- CTH Casings harvests, sorts and sells hog and sheep casings for worldwide food markets, particularly sausage manufacturers, and harvests, processes and sells hog and beef bowel package items for global pharmaceutical, food and feed market segments. CTH holds a leading position in the highly fragmented global casings market.
- CTH Meat By-Products harvests, purchases and processes hog, sheep and beef meat for customers in the global food and European pet food industries. In the meat by-products market, CTH is a major player with established sales networks in Europe and Asia.

Fuel Ingredients Segment

Our Fuel Ingredients segment consists of (i) our investment in the DGD Joint Venture, (ii) our biofuel business conducted under the Dar Pro® and Rothsay names and (iii) the bioenergy business conducted by Darling Ingredients International under the Ecoson and Rendac names.

Diamond Green Diesel

The DGD Joint Venture commenced operations in June 2013. The DGD Joint Venture operates a renewable diesel plant (the "DGD Facility") located in Norco, Louisiana capable of processing approximately 20,000 barrels per day of input feedstock to produce renewable diesel fuel and certain other co-products. We account for the DGD Joint Venture as an "investment in an unconsolidated subsidiary." The DGD Joint Venture operates the DGD Facility, which converts animal fats and used cooking oils, which are supplied in part by us, and other feedstocks that become economically and commercially viable, such as inedible corn oil and soybean oil, into renewable diesel. The DGD Facility uses an advanced hydroprocessing-isomerization process licensed from UOP LLC, known as the Ecofining™ Process, and a pretreatment process developed by the Desmet Ballestra Group designed to convert approximately 2.3 billion pounds per year of feedstocks into renewable diesel and certain other co-products. The Diamond Green Diesel renewable diesel product is sold to refiners under the Diamond Green Diesel® name to be blended with diesel fuel and is interchangeable with diesel produced from petroleum. For 2019, 2018 and 2017, biodiesel blenders registered with the Internal Revenue Service were eligible for a tax incentive in the amount of $1.00 per gallon of renewable diesel blended with petroleum diesel to produce a mixture containing at least 0.1% diesel fuel. In December 2019, this $1.00 per gallon blenders tax credit was reinstated retroactively for calendar years 2018 and 2019 and extended for calendar years 2020, 2021 and 2022. As a blender, the DGD Joint Venture has recorded approximately $274.7 million (to be received retroactively in fiscal year 2020), $155.9 million (to be received retroactively in fiscal year 2020) and $160.4 million (received retroactively in fiscal year 2018) of blenders tax credits for fiscal years 2019, 2018 and 2017, respectively, with Darling's portion equaling 50%. In August 2018, the DGD Joint Venture completed an expansion project that increased the DGD Facility's annual production capacity from 160 million gallons of renewable diesel to 275 million gallons and expanded outbound logistics for servicing the many developing low carbon fuel markets around North America and worldwide. In November 2018, the joint venture partners approved the DGD Joint Venture moving forward with another expansion project to construct a new, parallel facility (the "New Facility") located next to the current DGD Facility. The New Facility is expected to grow the DGD Joint Venture's annual production capacity by an additional 400 million gallons from the current capacity of 275 million gallons of renewable diesel to 675 million gallons of renewable diesel and provide the capability to separate naphtha for sale into low carbon fuel markets. In addition, the expansion project includes further expanded inbound and outbound logistics for servicing the many developing low carbon fuel markets around North America and worldwide. The DGD Joint Venture estimates completion and startup of the New Facility in the fourth quarter of 2021, and the total cost of the expansion project, including the naphtha production and improved logistics capability, is estimated to be approximately $1.1 billion. Additionally, in September 2019, the Company announced that the DGD Joint Venture was initiating an advanced engineering and development cost review for construction of a new renewable diesel plant to be located in Port Arthur, Texas. The proposed facility under review would be designed to produce 400 million gallons of renewable diesel annually as well as 40 million gallons of renewable naphtha. The final investment decision on the project is expected in 2021, subject to further engineering, obtaining necessary permits, and approval by the boards of the Company and Valero. If the decision is made to move forward, new plant construction could begin in 2021, with expected operations commencing in 2024.

Biofuel

We produce biodiesel at our facilities in the United States and Canada. In the United States, we use a portion of our rendered animal fats and recycled cooking oils, as well as third-party additives, to produce Bio G-3000™ Premium Diesel Fuel. We have the annual capacity to produce approximately two million gallons of Bio G-3000™ at our facility in Butler, Kentucky. Our facility in Sainte-Catherine, Quebec also processes tallow and recycled cooking oils produced by us into biodiesel. The Rothsay Quebec facility has a current annual capacity to produce approximately 14 million gallons a year. Our biodiesel product is sold to our internal divisions, as well as to commercial biodiesel blenders in the United States and Canada, to be used as biodiesel fuel, a clean burning additive for diesel fuel, or as a biodegradable solvent or cleaning agent. For its United States and Canada biodiesel operations, the Company recorded approximately $12.6 million in fiscal 2018 for the reinstated 2017 blenders tax credits and approximately $19.1 million in December 2019 for the reinstated 2018 and 2019 blenders tax credits.

Bioenergy

In Europe, Ecoson produces green power from biogas production out of organic sludge and food waste for combined heat plant installations. Ecoson is the largest industrial digestion operation in the Netherlands, with an output matching the annual use of energy needs of approximately 11,606 households. In addition, Ecoson's fat refinery produces refined fats and fatty acids. Ecoson also processes manure into natural biophosphate for use as fertilizer and green gas.

Rendac collects fallen stock and animal waste, also referred to as Category 1 and Category 2 material under applicable EU regulations, from farmers and slaughterhouses, and processes these materials into fats and meals, which can only be used as a low grade source of energy or fuel for boilers and cement kilns. With a specialized collection fleet of approximately 300 trucks, Rendac collects raw materials in the Netherlands, Germany, Luxembourg and Belgium. This business is a market leader in the countries of Belgium, Netherlands and Luxembourg (the "Benelux region") and certain parts of Germany, a predominantly regulated market with spare capacity requirements and long-term contracts with local governments. The market for the collection and processing of fallen stock in these regions is regulated, and government contracts provide for exclusivity of the service to the contracted partner.

Raw materials pricing and supply contracts

We have two primary pricing arrangements-formula and non-formula arrangements with our suppliers of poultry, beef, pork, bakery residuals and used cooking oil. Under a “formula” arrangement, the charge or credit for raw materials is tied to published finished product prices for a competing ingredient after deducting a fixed processing fee. We also acquire raw material under “non-formula” arrangements whereby suppliers are either paid a fixed price, are not paid, or are charged a collection fee, depending on various economic and competitive factors. The credit received or amount charged for raw materials under both formula and non-formula arrangements is based on various factors, including the type of raw materials, demand for the raw materials, the expected value of the finished product to be produced, the anticipated yields, the volume of material generated by the supplier and processing and transportation costs. Formula prices are generally adjusted on a weekly, monthly or quarterly basis, while non-formula prices or charges are adjusted as needed to respond to changes in finished product prices or related operating costs. Since most of our raw materials are residual by-products of meat processing and other food production, we are not able to contract with our suppliers to increase supply if demand for our products increases.

A majority of our U.S. volume of rendering raw materials, including all of our significant poultry accounts, and substantially all of our bakery feed raw materials are acquired on a “formula basis,” which in most cases is set forth in contracts with our suppliers, generally with multi-year terms. These “formulas” allow us to manage the risk associated with decreases in commodity prices by adjusting our costs of materials based on changes in the price of our finished products, while also permitting us, in certain cases, to benefit from increases in commodity prices. The formulas provided in these contracts are reviewed and modified both during the term of, and in connection with the renewal of, the contracts to maintain an acceptable level of sharing between us and our suppliers of the costs and benefits from movements in commodity prices. A majority of Rothsay’s North American volume of rendering raw materials are acquired based on prices fixed on a quarterly basis with suppliers, with the remaining portion acquired on a “formula basis.” Darling Ingredients International (including North American operations) acquires a majority of its volume of rendering raw materials at spot or quarterly fixed prices and, in general, has no long term contracts with its key suppliers. In fiscal year 2019 VION Food provided approximately 10% of Darling Ingredients International’s raw material supply (based on raw materials procured in fiscal year 2019). Approximately 86% of Darling's U.S. volume of raw materials in fiscal year 2019 was acquired on a "formula" basis.

Certain of the Company's geographic regions facilities are highly dependent on one or a few suppliers. During the 2019 fiscal year, the Company's 10 largest raw materials suppliers in North America accounted for approximately 31% of the total raw material processed by the Company in North America, with one single supplier accounting for approximately 7% of the total raw material processed in North America. In Europe, the Company's 10 largest raw material suppliers accounted for approximately 31% of the total raw material processed by the Company in Europe, with one single supplier accounting for approximately 11% of the total raw material processed in Europe. In China, the Company's 10 largest raw material suppliers accounted for approximately 31% of the total raw material processed by the Company in China, with one single supplier accounting for approximately 6% of the total raw material processed in China. In South America, the Company's 10 largest raw material suppliers accounted for approximately 72% of the total raw material processed by the Company in South America, with one single supplier accounting for approximately 16% of the total raw material processed in South America. See “Risk Factors - A significant percentage of our revenue is attributable to a limited number of suppliers and customers.” Should any of these suppliers choose alternate methods of disposal, cease or materially decrease their operations, have their operations interrupted by casualty, or otherwise cease using, or reduce the use of, the Company’s collection services, any operating facilities dependent on such suppliers could be materially and adversely affected. (See “Risk Factors-Certain of our operating facilities are highly dependent upon a single or a few suppliers.”) For a discussion of the Company’s competition for raw materials, see “Competition.”

MARKETING, SALES AND DISTRIBUTION OF FINISHED PRODUCTS

The Company sells its finished products worldwide. Finished product sales are primarily managed through our commodity trading departments. With respect to our North American operations, we have trading departments located at our corporate headquarters in Irving, Texas and at our regional office in Cold Spring, Kentucky. Darling Ingredients International’s finished product sales are managed primarily through trading departments that are located in Son en Breugel, the Netherlands, and through various offices located in Europe, Asia, South America and North America. Where appropriate, we coordinate international sales of common products in order to market them more efficiently. Our sales force is in contact with customers daily and coordinates the sale, and assists in the distribution of, most finished products produced at our processing plants. The Company also sells its finished products internationally directly to customers or, in some cases, through commodities brokers and agents. We market certain of our finished products under our Dar Pro Ingredients brand, certain specialty products under the Sonac name, collagen products under the Rousselot name and natural casings and meat by-products under the CTH name. See Note 22 of Notes to Consolidated Financial Statements for the period ended December 28, 2019 for a breakdown of the Company's sales by geographic regions.

The Company sells finished products in North America and throughout the world, primarily to producers of animal feed, pet food, biofuel, fertilizer and other consumer and industrial products, including oleo-chemicals, soaps and leather goods, for use as ingredients in their products or for further processing. Certain of our finished products are ingredients that compete with alternatives, such as corn, soybean oil, inedible corn oil, palm oils, soybean meal and heating oil, based on nutritional and functional values; therefore, the actual pricing for those finished products, as well as competing products, can be quite volatile. While the Company's principal finished products are generally sold at prices prevailing at the time of sale, the Company's ability to deliver large quantities of finished products from multiple locations and to coordinate sales from a central location enables us to sell into the market with the highest return. The Company's premium, value-added and branded products command significantly higher pricing relative to the Company's principal finished product lines due to their enhanced nutritional content, which is a function of the Company's specialized processing techniques. Customers for our premium, value-added and branded products include feed mills, pet food manufacturers, integrated poultry producers, the dairy industry and golf courses. Feed mills purchase meals, fats, blood products, and Cookie Meal® for use as feed ingredients. Pet food manufacturers require stringent feed safety certifications and consistently demand premium additives that are high in protein and nutritional content. As a result, pet food manufacturers typically purchase only premium or value-added products under supply contracts with us. Oleo-chemical producers use fats as feedstocks to produce specialty ingredients used in paint, rubber, paper, concrete, plastics and a variety of other consumer and industrial products. Darling Ingredients International's premium, value-added and branded products also command higher pricing, including with respect to collagen, natural casings, meat by-products, edible fat, heparin and specialty plasma products.

We obtain payment protection for most of our global export sales by requiring payment before shipment, either through bank letters of credit or cash against documents at the origin of the sale or guarantees of payment from government agencies. For U.S. sales, we are ordinarily paid for products in U.S. dollars and have not experienced any material currency translation losses or any material foreign exchange control difficulties. Darling Ingredients International's product sales are generally denominated in the local currency. However, in certain markets (such as South America), some product sales are denominated in non-functional currencies, such as U.S. dollars and euros. Darling Ingredients International hedges a portion of its non-functional currency product sales.

Our management monitors market conditions and prices for our finished products on a daily basis. If market conditions or prices were to significantly change, our management would evaluate and implement any measures that it may deem necessary to respond to the change in market conditions. For larger formula-based pricing suppliers, the indexing of raw material cost to finished product prices effectively establishes the gross margin on finished product sales at a stable level, providing us some protection from finished product price declines.

Finished products produced by the Company are shipped primarily by truck or rail from our plants shortly following production. While there can be some temporary inventory accumulations at various North American and international locations, particularly port locations for export shipments, with the exception of collagen and natural casings, inventories rarely exceed three weeks' production and, therefore, we use limited working capital to carry those inventories. Our limited inventories also reduce our exposure to fluctuations in finished-product prices. With respect to collagen and natural casings, Darling Ingredients International, in contrast, has historically carried much larger inventories due to the manufacturing process and market dynamics related to those products, which requires a greater amount of working capital to carry these investments. Other factors that influence competition, markets and the prices that we receive for our finished products include the quality of our finished products, consumer health consciousness, worldwide credit conditions, currency fluctuations, tariffs, and government aid and regulations. From time to time, we enter into arrangements with our suppliers of raw materials pursuant to which these suppliers have the option to buy back our finished products at market prices.

The Company operates a fleet of trucks, trailers and railcars to transport raw materials from suppliers and finished products to customers or ports for transportation by ship. It also utilizes third party freight companies to cost-effectively transfer materials and augment our in-house logistics fleet. Within our bakery and international by-products divisions, except for Rendac, substantially all inbound and outbound freight is handled by third party logistics companies.

COMPETITION

We believe we are the only global ingredients company with products generated principally from animal-origin raw material types; however, we compete with a number of regional and local players in our various sub-segments and end markets.

The procurement of raw materials currently presents greater challenges to our business than the sale of finished products. In North America, consolidation within the meat processing industry has resulted in bigger and more efficient slaughtering operations, the majority of which utilize "captive" renderers (rendering operations integrated with the meat or poultry packing operation). At the same time, there has been limited to no growth in the number of small meat processors, which have historically been a dependable source of supply for non-captive renderers, such as us. In addition, the slaughter rates in the meat processing industry are subject to economic conditions and, as a result, during periods of economic decline, the availability, quantity and quality of raw materials available to the independent renderers decreases. These factors have been offset, in part, however, by increasing environmental consciousness. The need for food service establishments in the United States to comply with environmental regulations concerning the proper disposal of used restaurant cooking oil should continue to provide a growth area for this raw material source. The rendering industry is highly fragmented with a number of local slaughtering operations that provide us with raw materials. In North America, we compete with other rendering, restaurant services and bakery residual businesses, and alternative methods of disposal of animal processing by-products and used restaurant cooking oil provided by trash haulers, waste management companies, biodiesel companies, anaerobic digestion companies and others. In addition, U.S. food service establishments have increasingly experienced theft of used cooking oil. A number of our competitors for the procurement of raw material are experienced, well-capitalized companies that have significant operating experience and historic supplier relationships. Competition for available raw materials is based primarily on price and proximity to the supplier.

In marketing our finished products domestically and internationally, we face competition from other processors and from producers of other suitable ingredient alternatives. However, we differentiate ourselves through the scope and depth of our product portfolio and geographic footprint. While we compete with a number of well capitalized companies across our business, such as Cargill, Inc., Tyson Foods, Inc. and JBS & Company in the U.S. products business, and others in the global collagen, bone products, and blood products business, we do not have a single competitor that we compete with across all of our products or geographies.

SEASONALITY

Although the amount of raw materials made available to us in each of our segments by our suppliers is relatively stable on a weekly basis, it is impacted by seasonal factors, including holidays, during which the availability of raw materials declines because major meat and poultry processors are not operating, and cold and other severe weather, which can hinder the collection of raw materials. Warm weather can also adversely affect the quality of raw materials processed and our yields on production because raw material deteriorates more rapidly in warm weather than in cooler weather. Weather can vary significantly from one year to the next and may impact the comparability of our operating results between periods. The amount of bakery residuals we process generally increases during the summer from June to September. Collagen sales generally decline in the summer.

INTELLECTUAL PROPERTY

The Company maintains valuable trademarks, service marks, copyrights, trade names, trade secrets, proprietary technologies and similar intellectual property, and considers our intellectual property to be of material value. We have registered or applied for registration of certain of our intellectual property, including the tricolor triangle used in our signage and logos and the names "Darling," "Darling Ingredients", "Griffin Industries," "Dar Pro Solutions," "Dar Pro," "Rousselot," "Sonac," "Ecoson," "Rendac," "Rothsay," "Nature Safe," "CleanStar," "Peptan," "Cookie Meal," and "Bakery Feeds," and certain patents, both domestically and internationally, relating to the process for preparing nutritional supplements and the drying and processing of raw materials.

EMPLOYEES AND LABOR RELATIONS

As of December 28, 2019, the Company employed globally approximately 10,100 persons full-time. While we have no national or multi-plant union contracts, at December 28, 2019, approximately 19% of the Company's North American employees were covered by multiple collective bargaining agreements. In addition, approximately 44% of Darling Ingredients International's employees are covered by various collective bargaining agreements. Management believes that our relations with our employees and their representatives are satisfactory. There can be no assurance, however, that these satisfactory arrangements will continue, or that new agreements will be reached without union action or on terms satisfactory to us.

REGULATIONS

We are subject to the rules and regulations of various federal, state, local and foreign governmental agencies including, but not limited to, the following principal governmental agencies in the following countries:

United States

- *The Food and Drug Administration* ("FDA"), which regulates pharmaceutical products and food and feed safety. The FDA is responsible for enforcement of rules (21 C.F.R. 589.2000 and 589.2001, referred to herein as the "BSE Feed Rule") to prevent the spread of bovine spongiform encephalopathy ("BSE"), which is commonly referred to as "mad cow" disease. These regulations prohibit the use of mammalian proteins, with some exceptions, and tallow having more than 0.15% impurities in feeds for cattle, sheep and other ruminant animals. In addition, the BSE Feed Rule prohibits the use of brain and spinal cord material from cattle aged 30 months and older or the carcasses of such cattle, if the carcasses are not inspected and passed for human consumption and the brain and spinal cord are not removed, in the feed or food for all animals. The FDA has also implemented restrictions on the use of specified risk materials ("SRM"), material from nonambulatory disabled cattle, and other specified cattle materials in human food (21 C.F.R. 189.5) and in cosmetics (21 C.F.R. 700.27). In addition, the FDA is responsible for implementing and enforcing the FDA Food Safety Modernization Act ("FSMA"), which was signed into law on January 4, 2011, and gave FDA a series of powers intended to better protect human and animal health by adopting a modern, preventive and risk-based approach to food safety regulation. The FDA finalized major rules under FSMA affecting the production, importation and transport of human and animal food. Management believes we are in compliance with the provisions of these rules. The FDA also has regulations governing food additives in animal feed and pet food, which could apply to the use of protein from black soldier fly larvae in such products. The FDA acknowledges that it considers the listing of animal feed and pet food ingredients in the Association of American Feed Control Officials ("AAFCO") *Official Publication* to permit marketing of such ingredients in interstate commerce, provided there are no safety concerns regarding the use or composition of the ingredients. See Item 1A "Risk Factors - Our business may be affected by the impact of animal related disease, such as BSE and other food safety issues," for more information regarding certain FDA rules that affect our business, including the BSE Feed Rule and rules and regulations under FSMA.

- The *United States Department of Agriculture* ("USDA"), which has authority over meat, poultry, and egg products and inspects producers to ensure compliance with applicable laws and regulations. Within the USDA, two agencies exercise direct regulatory oversight of our activities:

  - *Animal and Plant Health Inspection Service* ("APHIS") certifies facilities and claims made for exported materials to meet importing country requirements and establishes and enforces import requirements for live animals and animal by-products as well as plant products, and

  - *Food Safety and Inspection Service* ("FSIS") regulates sanitation and biosecurity of our facilities and our food safety programs at plants producing edible fats and meats, among other things.

  On January 12, 2004, FSIS issued three interim final rules designed to enhance its BSE safeguards in order to minimize human exposure to BSE infective tissues and assure consumers of the safety of the meat supply. These regulations prohibited non-ambulatory animals from entering the food chain, required removal of SRMs at slaughter and prohibited carcasses from cattle tested for BSE from entering the food chain until the animals tested negative for BSE, among other provisions. On July 13, 2007, FSIS published an affirmation of the interim final rules concerning prohibition of SRMs and non-ambulatory animals and the use of stunning devices, with several amendments.

  On November 19, 2007, APHIS implemented revised import regulations to allow Canadian cattle 30 months of age and older and born on or after March 1, 1999, and bovine products derived from such cattle to be imported into the United States for any use, if such cattle and products complied with specific FDA and FSIS regulations. Imports of Canadian cattle younger than 30 months of age have been allowed since March 2005. Imports of SRMs from Canadian-born cattle slaughtered in Canada are not permitted. On March 4, 2014, APHIS implemented amended import regulations concerning cattle and bovine products. The final rule established a system for classifying regions as to BSE risk that is consistent with international standards set by the World Organization for Animal Health ("OIE"), and based importation requirements for cattle and beef products on: (i) the inherent risk of BSE infectivity in the commodity to be imported and (ii) the BSE risk status of the region from which the commodity originates.

- The *U.S. Environmental Protection Agency* ("EPA"), which regulates air and water discharges and hazardous and solid waste requirements among other environmental requirements, as well as local and state environmental agencies with jurisdiction over environmental matters affecting the Company's operations. The EPA also administers the National Renewable Fuel Standard Program ("RFS2").

- The *Association of American Feed Control Officials* ("AAFCO"), which is a voluntary membership association of state, and federal agencies that regulate the sale and distribution of animal feeds and animal drug remedies. Although, AAFCO has no regulatory authority, it brings together stakeholders and works to develop and implement uniform and equitable laws, regulations, standards, definitions, and enforcement polices for regulating the manufacture, labeling, distribution and sale of animal feeds.

- *State Departments of Agriculture*, which regulate animal by-product collection and transportation procedures and animal feed quality.

- The *United States Department of Transportation* ("USDOT"), as well as local and state transportation agencies, which regulate the operation of our commercial vehicles.

- The *U.S. Occupational Safety and Health Administration* ("OSHA"), which is the main federal agency charged with the enforcement of worker safety and health legislation.

- The *Securities and Exchange Commission* ("SEC"), which regulates securities and information required in annual, quarterly and other reports filed by publicly traded companies.

European Union and EU Member States

- The *European Commission, Directorate-General for Health and Food Safety*, which is responsible for EU policy on food safety and health and for monitoring the implementation of related laws, including but not limited to food, feed, human and animal health, technical uses of animal by-products and packaging.

- The *European Medicines Agency*, which is responsible for the scientific evaluation, supervision and safety monitoring of human and veterinary pharmaceutical products in the EU and establishes guidance amongst others for bovine-containing human and veterinary pharmaceutical products, and maximum residue limits.

- The *European Food Safety Authority*, which advises the European Commission, the European Parliament and the EU Member States on food safety matters, including on animal feed, animal health and welfare, biological hazards and contaminants.

- The *Council of Europe*, *European Directorate for the Quality of Medicine and Healthcare*, which establishes quality standards for safe human and veterinary pharmaceutical products in Europe by developing guidance and standards in the areas of blood transfusion, organ, cell and tissue transportation and consumer health issues.

- The *Council of Europe, European Pharmacopeia*, which establishes requirements for the qualitative and quantitative composition of human and veterinary pharmaceutical products, the tests to be carried out on medicines and on substances and materials used in their production.

- The *European Commission, Directorate-General for the Environment*, which is responsible for EU policy on the environment and for monitoring the implementation of related laws, including but not limited to Directive 2010/75/EU on Industrial Emissions (Integrated Pollution Prevention and Control) and the Best Available Techniques Reference Document on the Slaughterhouses and Animal By-products Industries.

- The *European Chemicals Agency*, which is responsible for the implementation of the Regulation (EC) No 1907/2006 on the Registration, Evaluation, Authorisation and Restriction of Chemicals.

- *EU Member States* must ensure adequate enforcement, control and supervision of principles set forth in numerous EU Directives and Regulations, such as minimum safety and health requirements for the workplace and use of work equipment by workers. EU Member States may be allowed to maintain or establish more stringent measures in their own legislation. In general, each EU Member State's ministry of labor affairs is responsible for regulating health and safety at work and labor inspection services and is in charge of controlling compliance with applicable legislation and regulations.

- The *Dutch Food and Consumer Product Safety Authority (Nederlandse Voedsel- en Warenautoriteit)*, which issues permits, approvals and registrations to establishments or plants engaged in certain activities related to the handling of animal by-products and food and feed production.

- The *Belgian Federal Agency for the Safety of the Food Chain (FASFC) (Federal Agentschap voor de veiligheid van de voedselketen (FAVV) or Agence fédérale pour la sécurité de la chaîne alimentaire (AFSCA))*, which issues permits, authorizations, approvals and registrations to establishments or plants engaged in certain activities related to the handling of animal by-products and food and feed production.

- In Belgium, the *Public Waste Agency of Flanders (Openbare Vlaamse Afvalstoffenmaatschappij)*, the Soil and Waste Department of the Public Service of Wallonia (*Département du Sol et des Déchets du Service Public de Wallonie*) and Brussels Environment (*Leefmilieu Brussel or Bruxelles Environnement*), which issues permits, approvals and registrations to establishments or plants carrying out certain activities related to the handling of animal by-products and food and feed production.

- The *German Competent Authorities at state (Länder) level*, which issue permits, approvals and registrations to establishments or plants carrying out certain activities related to the handling of animal by-products and food and feed production.

- In Poland, the *General Veterinary Inspectorate* (*G³ówny Inspektorat Weterynarii*), which issues permits, approvals and registrations to establishments or plants engaged in certain activities related to the handling of animal by-products and food and feed production.

United Kingdom

- The United Kingdom's *Health and Safety Executive* is the government body responsible for enforcing health and safety at work legislation, such as the *Health and Safety at Work Act 1974*, and enforcing health and safety law in industrial workplaces, together with local authorities.

- The United Kingdom's *Animal and Plant Health Agency* issues permits, approvals and registrations to plants carrying out certain activities related to the handling of animal by-products. Feed businesses need to be approved or registered with their local authority trading standards office.

Canada

- The *Canadian Food Inspection Agency* ("CFIA"), which regulates animal health and the disposal of animals and their products or by-products.

- *Canadian provincial ministries of agriculture and the environment*, which regulate food safety and quality, air and water discharge requirements and the disposal of deadstock.

- The *Canadian Department of the Environment* ("Environment Canada"), which ensures compliance with Canadian federal air and water discharge and wildlife management requirements and the various provincial and local environmental ministries and agencies.

- The *Canadian Technical Standards and Safety Authority* ("TSSA"), a non-profit organization that regulates the safety of fuels and pressure vessels and boilers.

China

- The *General Administration of Quality Supervision, Inspection and Quarantine*, which supervises the import and export of food and feed.

- The *Ministry of Health of the People's Republic of China*, which establishes standards for food and pharmaceutical products.

- The *Chinese Pharmacopeia*, which establishes standards for pharmaceutical products.

- *Ministry of Environmental Protection of the People's Republic of China*, which regulates the environmental protection standards.

- *Ministry of Labor and Social Security of the People's Republic of China*, which establishes the regulations of labor, welfare and health insurance.

- *State Administration of Work Safety*, which establishes the work safety standards and regulations.

Brazil

- The *Ministry of Agriculture, Cattle and Supply (Ministério da Agricultura, Pecuária e Abastecimento)*, which regulates the production of collagen.

- *Ministry of Labor (Ministério do Trabalho)*, which regulates labor health and safety.
- *National Water Agency (ANA)*, which regulates waste water discharge permits.
- *State Government Agency CETESB*, responsible for the control, supervision, monitoring and licensing process for pollution generating activities.

Australia

- The *Australian Quarantine and Inspection Service*, which regulates the import and export of agricultural products, including animal by-products.
- The *Department of Agriculture, Fisheries and Forestry*, which administers meat and animal by-product legislation.
- *PrimeSafe*, which is the principal regulator of meat and animal by-product businesses in the State of Victoria.
- The *Australian Competition and Consumer Commission*, which regulates Australia's competition and consumer protection law.
- The *Australian Securities and Investments Commission*, which regulates Australia's company and financial services laws.
- *Worksafe Victoria*, which is the regulator responsible for administering and enforcing occupational health and safety laws and regulations in the State of Victoria.
- *Environment Protection Authority Victoria*, which administers environmental protection laws in Victoria.
- *Goulburn-Murray Rural Water Corporation*, which manages allocation and use of water under local water laws in Victoria.

Rules and regulations promulgated by these and other agencies may influence our operating results at one or more facilities.

AVAILABLE INFORMATION

We make available, free of charge, through our investor relations web site, our reports on Forms 10-K, 10-Q and 8-K, and amendments to those reports, as well as all other filings with the SEC, as soon as reasonably practicable after such materials are electronically filed with, or furnished to, the SEC pursuant to Section 13(a) or 15(d) of the Exchange Act.

The Company's website is http://www.darlingii.com and the address for the Company's investor relations web site is http://ir.darlingii.com. Information contained on these websites is not and should not be deemed to be a part of this report or any filing filed with, or furnished to, the SEC by us.

ITEM 1A. RISK FACTORS

An investment in Darling involves substantial risks. In consultation with your financial, tax and legal advisors, you should carefully consider, among other matters, the following risks described in, as well as the other information contained in or incorporated by reference into, this report. If any of the events described in the following risk factors actually occur, our business, financial condition, prospects or results of operations could be materially adversely affected, the market price of our common stock could decline and you may lose all or part of your investment in the common stock. The risks and uncertainties described below are not the only risks we face. Additional risks and uncertainties that are not currently known or that are currently deemed to be immaterial may also materially and adversely affect our business operations and financial condition or the market price of our common stock. The risks described below also include forward-looking statements and our actual results may differ substantially from those discussed in these forward-looking statements. See the section entitled "Forward-Looking Statements" in this report.

Risks Related to the Company

The prices of many of our products are subject to significant volatility associated with commodities markets.

Our principal finished products include MBM, PM, BFT, YG, PG, BBP and hides, which are commodities. We also manufacture and sell a number of other products that are derived from animal by-products and many of which are commodities or compete with commodities. The prices of these commodities are quoted on, or derived from prices quoted on, established commodity markets. Accordingly, our results of operations will be affected by fluctuations in the prevailing market prices of these finished products or of other commodities that may be substituted for our products by our customers. Historically, market prices for commodity grains, fats and food stocks have fluctuated in response to a number of factors, including global changes in supply and demand resulting from changes in local and global economic conditions, changes in global government agriculture programs, changes in energy policies of U.S. and foreign governments, changes in international agricultural trading policies, impact of disease outbreaks on protein sources and the potential effect on supply and demand, as well as weather conditions during the growing and harvesting seasons. While we seek to mitigate the risks associated with price declines, including by diversifying our finished products offerings, through the use of formula pricing tied to commodity prices for a substantial portion of our raw materials (which may not protect our margins in periods of rapidly declining prices) and hedging, a significant decrease in the market price of any of our products or of other commodities that may be substituted for our products would have a material adverse effect on our results of operations and cash flow. Furthermore, rapid and material changes in finished goods prices, including competing agricultural-based alternative ingredients, generally have an immediate and, often times, material impact on the Company's gross margin and profitability resulting from the brief lapse of time between the procurement of the raw materials and the sale of the finished goods.

The prices available for the Company's Food Ingredients segment's collagen, edible fats and natural casings products are influenced by other competing ingredients, including plant-based and synthetic hydrocolloids and artificial casings. In the collagen operation, in particular, the cost of the Company's animal-based raw material moves in relationship to the selling price of the finished goods. The processing time for the Food Ingredients segment's collagen and casings is generally 30 to 60 days, which is substantially longer than the Company's Feed Ingredients segment's animal by-products operations. Consequently, the Company's gross margin and profitability in this segment can be influenced by the movement of finished goods prices from the time the raw materials were procured until the finished goods are sold.

The Company's Fuel Ingredients segment, which converts fats and oils into renewable diesel, organic sludge and food waste into biogas, and fallen stock into low-grade energy sources, is impacted by world energy prices for oil, electricity and natural gas, as well as potential competition from the adoption of non-rendered feedstock in biodiesel markets.

In addition, increases in the market prices of raw materials would require us to raise prices for our premium, value-added and branded products to avoid margin deterioration. There can be no assurance as to whether we could implement future price increases in response to increases in the market prices of raw materials or how any such price increases would affect future sales volumes to our customers. Our results of operations could be materially and adversely affected in the future by this volatility.

Furthermore, an increased preference by meat processors for alternative feed ingredients, such as all vegetable diets in the case of poultry producers, could negatively impact the prices of certain of our finished products which would need to be sold to alternative markets and destinations.

Our business is dependent on the procurement of raw materials, which is the most competitive aspect of our business.

Our management believes that the most competitive aspect of our business is the procurement of raw materials rather than the sale of finished products. Many of our raw materials are derived directly or indirectly from animal by-products, which results in the following challenges:

- In North America, consolidation within the meat processing industry has resulted in bigger and more efficient slaughtering operations, the majority of which utilize "captive" renderers (rendering operations integrated with the meat or poultry packing operation).

- Concurrently, there has been limited to no growth in the number of small U.S. meat processors, which have historically been a dependable source of supply for non-captive or independent U.S. renderers, such as us.

- The slaughter rates in the U.S. and international meat processing industry are subject to decline during poor economic conditions when consumers generally reduce their consumption of protein, and as a result, during such periods of decline, the availability, quantity and quality of raw materials available to independent renderers, such as us, decreases.

- In addition, the Company has seen an increase in the use of used cooking oil in the production of biofuels, which has increased competition for the collection of used cooking oil from restaurants and other food service establishments and contributed to an increase in the frequency and magnitude of theft of used cooking oil in the United States.

- Furthermore, a decline in the general performance of the global economy (including a decline in consumer confidence) and an inability of consumers and companies to obtain credit in the financial markets could have a negative impact on our raw material volume, such as through the forced closure of any of our raw material suppliers. A significant decrease in available raw materials or a closure of a significant number of raw material suppliers could materially and adversely affect our business, results of operations and financial condition, including the carrying value of certain of our assets.

The rendering industry is highly fragmented and both the rendering and bakery residual industries are very competitive. We compete with other rendering businesses and alternative methods of disposal of animal by-products, bakery residue and used cooking oil provided by trash haulers, waste management companies and biodiesel companies, as well as the alternative of illegal disposal. See Item 1. "*Competition.*" In addition, U.S. restaurants experience theft of used cooking oil, the frequency and magnitude of which increases with the rise in value of used cooking oil. Depending on market conditions, we either charge a collection fee to offset a portion of the cost incurred in collecting raw material, collect on a no pay/no charge basis or will pay for the raw material. To the extent suppliers of raw materials look to alternate methods of disposal, whether as a result of our collection fees being deemed too expensive, the payments we offer being deemed too low or otherwise, our raw material supply will decrease and our collection fee revenues will decrease, which could materially and adversely affect our business, results of operations and financial condition. In addition, the amount of raw material acquired, which has a direct impact on the amount of finished goods produced, can also have a material effect on our gross margin reported, as the Company has a substantial amount of fixed operating costs. In addition, we utilize an extensive vehicle fleet to collect and transport raw material, for which we compete with other industries for qualified drivers. The U.S. has been experiencing a growing shortage of truck drivers. Our failure to hire and retain a sufficient number of truck drivers to operate our fleet could negatively impact our ability to collect and transport raw material in an efficient and cost-effective manner.

A majority of the Company's U.S. volume of animal by-product raw materials, including all of its significant U.S. poultry accounts, and substantially all of the Company's U.S. bakery feed raw materials, are acquired on a "formula basis," which in most cases is set forth in contracts with our suppliers, generally with multi-year terms. These "formulas" allow us to mitigate the risks associated with decreases in commodity prices by adjusting our costs of materials based on changes in the price of our finished products, while also permitting us, in certain cases, to benefit from increases in commodity prices. The formulas provided in these contracts are reviewed and modified both during the term of, and in connection with the renewal of, the contracts to maintain an acceptable level of sharing between us and our suppliers of the costs and benefits from movements in commodity prices. Changes to these formulas or the inability to renew such contracts could have a material adverse effect on our business, results of operations and financial condition. A majority of Rothsay's animal by-product raw materials are acquired based on prices fixed on a quarterly basis with suppliers, with the remaining portion acquired on a "formula basis." A majority of Darling Ingredients International's volume of animal by-product raw materials are acquired at spot or quarterly fixed prices.

The DGD Joint Venture subjects us to a number of risks.

In January 2011, our wholly-owned subsidiary entered into a limited liability company agreement (as subsequently amended, the "DGD LLC Agreement") with a wholly-owned subsidiary of Valero to form the DGD Joint Venture, which was formed to design, engineer, construct and operate the DGD Facility, which as a result of the expansion project completed in August 2018 is now capable of processing approximately 20,000 barrels per day of input feedstock to produce renewable diesel fuel and certain other co-products. The DGD Facility, which is located adjacent to Valero's refinery in Norco, Louisiana, reached mechanical completion and began production of renewable diesel in June 2013. Effective May 1, 2019, the DGD LLC Agreement was amended and restated for the purpose of updating the agreement in certain respects, including to remove certain provisions that were no longer relevant and to add new provisions relating to the DGD Joint Venture's expansion project currently underway to construct a new, parallel facility located next to the current facility, as further described below. As of December 28, 2019, under the equity method of accounting, we had an investment in the DGD Joint Venture of approximately $661.5 million included on the consolidated balance sheet. There is no assurance that the DGD Joint Venture will continue to be profitable or allow us to continue to make a return on our investment.

In November 2018, the joint venture partners approved the DGD Joint Venture moving forward with another expansion project to construct a new, parallel facility (the "New Facility") located next to the current facility. The New Facility is expected to grow the DGD Joint Venture's annual production capacity by an additional 400 million gallons from the current capacity of 275 million gallons of renewable diesel to 675 million gallons of renewable diesel and provide the capability to separate naphtha for sale into low carbon fuel markets. In addition, the expansion project includes expanded inbound and outbound logistics for servicing the many developing low carbon fuel markets around North America and worldwide. The DGD Joint Venture estimates completion and startup of the New Facility in the fourth quarter of 2021, and the total cost of the expansion project, including the naphtha production and improved logistics capability, is estimated to be approximately $1.1 billion. Based on forecasted margins as of the date of this report, the expansion project is expected to be substantially funded by DGD Joint Venture cash flow; however, the DGD LLC Agreement provides that until such time as the New Facility is complete and operational, the joint venture partners shall be required to make capital contributions or, if they agree, loans, to the DGD Joint Venture should the excess available cash in the DGD Joint Venture, as determined on specified dates and in accordance with the provisions contained in the DGD LLC Agreement, fall below $50.0 million. While construction on the expansion project is underway, there is no guarantee that unforeseen issues will not arise in connection with the completion or startup of the expansion project, and any unexpected significant changes to the scope of the project related thereto could require investment of additional financial resources by the DGD Joint Venture and/or the joint venture partners, including the Company, which could be significant.

The DGD Joint Venture is dependent on governmental energy policies and programs, such as the National Renewable Fuel Standard Program ("RFS2") and low carbon fuel standards ("LCFS") (such as in the state of California), which positively impact the demand for and price of renewable diesel. Any changes to, a failure to enforce or a discontinuation of any of these programs could have a material adverse effect on the DGD Joint Venture. See the section entitled *"Risk Factors-Risks Related to the Company-Our biofuels business may be affected by energy policies of U.S. and foreign governments.*" Similarly, the DGD Joint Venture is subject to the risk that new or changing technologies may be developed that could meet demand for renewable diesel under governmental mandates in a more efficient or less costly manner than the technologies used by the DGD Joint Venture, which could negatively affect the price of renewable diesel and have a material adverse effect on the DGD Joint Venture.

In addition, the operation of a joint venture such as this involves a number of risks that could harm our business and result in the DGD Joint Venture not performing as expected, such as:

- problems integrating or developing operations, personnel, technologies or products;

- the unanticipated breakdown or failure of equipment or processes, including any unforeseen issues that may arise in connection with the operation of the DGD Facility or completion and startup of any expansion projects and the New Facility or the possibility of equipment failure as a result of materials degradation;

- the inaccuracy of our assumptions about prices for the renewable diesel that the DGD Joint Venture produces;

- unforeseen engineering or environmental issues, including new or more stringent environmental regulations affecting operations;

- the inaccuracy of our assumptions about the timing and amount of anticipated revenues and operating costs including feedstock prices;

- the diversion of management time and resources;

- difficulty in obtaining and maintaining permits and other regulatory issues, potential license revocation and changes in legal requirements;

- difficulties in establishing and maintaining relationships with suppliers and end user customers;

- the risk that one or more competitive new renewable diesel plants are constructed that use different technologies from the DGD Facility and result in the marketing of products that are more effective as a substitute for carbon-based fuels or less expensive than the products marketed by the DGD Joint Venture;

- performance below expected levels of output or efficiency;

- disruptions in the ability of the pipelines, vessels, or railroads to transport feedstocks or products because of weather events, accidents, derailment, collision, fire, explosion, governmental regulations, or third-party actions;

- reliance by the DGD Joint Venture on Valero and its adjacent refinery facility for many services and processes;

- possible impairment of the acquired assets, including intangible assets, in connection with the occurrence of any other risks associated with the DGD Joint Venture;

- possible third-party claims of intellectual property infringement; and

- being forced to sell our equity interests in the DGD Joint Venture pursuant to buy/sell provisions in the DGD LLC Agreement such that we would no longer continue to realize the benefits of the DGD Joint Venture.

If any of these risks described above were to materialize and the operations of the DGD Joint Venture were significantly disrupted, it could have a material adverse effect on our business, financial condition and results of operations.

Our biofuels business may be affected by energy policies of U.S. and foreign governments.

Pursuant to the requirements established by the Energy Independence and Security Act of 2007, the EPA finalized regulations for RFS2 in 2010. The regulation mandated the domestic use of biomass-based diesel (biodiesel or renewable diesel) of 1.0 billion gallons in 2012. Beyond 2012, the regulation requires a minimum of 1.0 billion gallons of biomass-based diesel for each year through 2022, which amount is subject to increase by the Administrator of the EPA. The volume mandates for 2019 were 2.1 billion gallons for biomass based diesel, 4.92 billion gallons for advanced biofuel and 19.92 billion gallons for renewable fuel. The EPA has also established a final volume mandate for biomass based diesel for 2020 of 2.43 billion gallons. In December 2019, the EPA finalized the volume mandates for 2020 advanced biofuel at 5.09 billion gallons and for renewable fuel at 20.09 billion gallons. In addition, the EPA established the 2021 biomass based diesel mandate at 2.43 billion gallons. Biomass-based diesel qualifies to fulfill the biomass based diesel requirement, the non-specified portion of the advanced biofuel requirement and the total renewable fuel requirement. In order to qualify as a “renewable fuel” each type of fuel from each type of feedstock is required to lower greenhouse gas emissions (“GHG”) by levels specified in the regulation. The EPA has determined that biofuels (either biodiesel or renewable diesel) produced from waste oils, fats and greases result in an 86% reduction in GHG emissions, exceeding the 50% requirement established by the regulation. Prices for our finished products may be impacted by worldwide government policies relating to renewable fuels and GHG. Programs like RFS2 and LCFS and tax credits for biofuels both in the United States and abroad may positively impact the demand for our finished products. In December 2019 the blenders tax credit was retroactively reinstated for calendar years 2018 and 2019 and extended for calendar years 2020, 2021, and 2022 at $1.00 per gallon. As a blender, in December 2019, the DGD Joint Venture has recorded approximately $155.9 million of blenders tax credits relating to volume sold in 2018 and $274.7 million of blenders tax credits relating to volume sold in 2019, with Darling's portion equaling 50%. For its United States and Canada biodiesel operations, the Company recorded approximately $12.6 million in fiscal 2018 for the reinstated 2017 blenders tax credits and approximately $19.1 million in December 2019 for the reinstated 2018 and 2019 blenders tax credits. While in fiscal 2019, the amount of tax credits for biofuels impacting the Company was material, legal challenges or changes to, a failure to enforce, reductions in the mandated volumes under, or discontinuing any of these programs could have a negative impact on our business and results of operations.

We are highly dependent on natural gas, diesel fuel and electricity, the price of which can be volatile, and such dependency could materially adversely affect our business.

Our operations are highly dependent on the use of natural gas, diesel fuel and electricity. We consume significant volumes of natural gas to operate boilers in our plants, which generate steam to heat raw materials. Natural gas prices represent a significant cost of facility operations included in cost of sales. We also consume significant volumes of diesel fuel to operate our fleet of tractors and trucks used to collect raw materials. Diesel fuel prices represent a significant component of cost of collection expenses included in cost of sales. Prices for both natural gas and diesel fuel can be volatile and therefore represent an ongoing challenge to our operating results. Although we continually manage these costs and hedge our exposure to changes in fuel prices through our formula pricing, and from time to time, derivatives, a material increase in prices for natural gas and/or diesel fuel over a sustained period of time could materially adversely affect our business, results of operations and financial condition. We also require a significant amount of electricity in operating certain of our facilities, a disruption of which or a significant increase in the cost of which could have a material adverse effect on the business and results of operations of the affected facility.

A significant percentage of our revenue is attributable to a limited number of suppliers and customers.

In fiscal year 2019, the Company's top ten customers for finished products accounted for approximately 25% of product sales. In addition, the Company's top ten raw material suppliers accounted for approximately 23% of its raw material supply in the same period. VION Food, Darling Ingredients International’s largest raw materials supplier, accounted for approximately 10% of Darling Ingredients International’s raw materials supply in fiscal year 2019. VION Food supplies Darling Ingredients International with by-products generated by VION Food’s operations. MFI, Rothsay’s largest raw materials supplier, accounted for approximately 20% of Rothsay’s raw materials supply in fiscal year 2019. In connection with the acquisition of Rothsay, we entered into a seven-year supply agreement with MFI that runs through October 27, 2020 to supply us with substantially all of the MFI raw materials processed by Rothsay prior to the sale. As of the date of this report, the Company is negotiating with MFI an extension to the agreement for the continued supply of MFI raw materials.

Disruptions or modifications to, or termination of, our relationships with any of our significant suppliers or customers, or financial difficulties experienced by any of our suppliers or customers that lead to curtailment or termination of their operations, could cause our businesses to suffer significant financial losses and could have a material adverse effect on our business, earnings, financial condition and/or cash flows.

Certain of our operating facilities are highly dependent upon a single or a few suppliers.

Certain of our operating facilities are highly dependent on one or a few suppliers. Should any of these suppliers choose alternate methods of disposal, cease their operations, have their operations interrupted by casualty, curtail their operations or otherwise cease using our collection services, these operating facilities may be materially and adversely affected, which could materially and adversely affect our business, results of operations and financial condition.

We face risks associated with our international activities, which could negatively affect our sales to customers in foreign countries and our operations and assets in such countries.

We conduct foreign operations in Europe, Canada, Asia, South America and Australia. While we expect that our geographical diversity reduces our exposure to risks in any one country or part of the world, it also subjects us to the various risks and uncertainties relating to international sales and operations, including:

- imposition of tariffs, quotas, trade barriers and other trade protection measures imposed by foreign countries regarding the importation of poultry, beef and pork products, in addition to operating, import or export licensing requirements imposed by various foreign countries;

- imposition of tariffs, quotas, trade barriers and other trade protection measures imposed by the U.S. against foreign countries;

- imposition of border restrictions by foreign countries with respect to the import of poultry, beef and pork products due to animal disease or other perceived health or safety issues;

- change in existing trade agreements, such as the North American Free Trade Agreement (NAFTA), which could negatively impact our business;

- impact of currency exchange rate fluctuations between the U.S. dollar and foreign currencies, particularly the euro, the Canadian dollar, the Chinese renminbi, the Brazilian real, the British pound, the Japanese yen, the Australian dollar and the Polish zloty, which may reduce the U.S. dollar value of the revenues, profits and cash flows we receive from non-U.S. markets or of our assets in non-U.S. countries or increase our supply costs, as measured in U.S. dollars in those markets;

- exchange controls and other limits on our ability to import raw materials, import or export finished products or to repatriate earnings from overseas, such as exchange controls in effect in China, that may limit our ability to repatriate earnings from those countries;

- different regulatory structures (including creditor rights that may be different than in the United States) and unexpected changes in regulatory environments (including, without limitation, in China), including changes resulting in potentially adverse tax consequences or imposition of onerous trade restrictions, price controls, industry controls, animal and human food safety controls, employee welfare schemes or other government controls;

- political or economic instability, social or labor unrest or changing macroeconomic conditions or other changes in political, economic or social conditions in the respective jurisdictions;

- changes in our effective tax rate, including tax rates that may exceed those in the United States, earnings that may be subject to withholding requirements and incremental taxes upon repatriation, changes in the mix of our business from year to year and from country to country, changes in rules related to accounting for income taxes, changes in tax laws in any of the jurisdictions in which we operate and adverse outcomes from tax audits;

- compliance with and enforcement of a wide variety of complex U.S. and non-U.S. laws, treaties and regulations, including, without limitation, anti-bribery laws such as the U.S. Foreign Corrupt Practices Act (the “FCPA”), the U.K. Bribery Act 2010, the Brazilian corporate anti-corruption law and similar anti-corruption legislation in many jurisdictions in which we operate, as well as economic and trade sanctions enforced by the U.S. Department of the Treasury's Office of Foreign Assets Control ("OFAC"), the European Union ("EU") and other governmental entities; and

- distribution costs, disruptions in shipping or reduced availability or increased costs of freight transportation.

These risks and uncertainties could jeopardize or limit our ability to transact business in one or more of our international markets or in other developing markets and may have a material adverse effect on our business, results of operations, cash flows and financial condition.

We may incur material costs and liabilities in complying with government regulations.

We are subject to the rules and regulations of various governmental agencies in the United States, the EU, Canada, China and the other countries in which Darling Ingredients International operates. These include rules and regulations administered by governmental agencies at the supranational, federal, state, provincial or local level. See Item 1. "*Business - Regulations*" for a listing of certain governmental agencies to which we are subject.

The applicable rules, regulations and guidance promulgated by these and other agencies, which are likely to change over time, affect our operations and may influence our operating results at one or more facilities. Furthermore, the loss of or failure to obtain necessary federal, state, provincial or local permits and registrations at one or more of our facilities could halt or curtail operations at impacted facilities, which could result in impairment charges related to the affected facility and otherwise adversely affect our operating results. In addition, our failure to comply with applicable rules, regulations and guidance, including obtaining or maintaining required operating certificates or permits, could subject us to: (i) administrative penalties and injunctive relief; (ii) civil remedies, including fines, injunctions and product recalls; and/or (iii) adverse publicity. There can be no assurance that we will not incur material costs and liabilities in connection with these rules, regulations and guidance.

Because of our international operations throughout much of the world, we could be adversely affected by violations of the FCPA and similar anti-bribery laws, as well as laws and regulations governing international transactions (such as the regulations administered by OFAC). The FCPA and similar anti-bribery laws generally prohibit companies and their intermediaries from making improper payments or providing anything of value to improperly influence government officials or other third parties for the purpose of obtaining or retaining business or obtaining an unfair business advantage. OFAC regulations and other economic sanctions laws and regulations generally prohibit U.S. persons from engaging in transactions or dealings with certain specified countries, territories, people or entities. Recent years have seen a substantial increase in the global enforcement of anti-corruption laws and economic sanctions laws and regulations. Our operations outside the United States, including in developing countries, could increase the risk of such violations. In addition, we may enter into joint ventures with joint venture partners who are domiciled in areas of the world with anti-bribery laws, regulations and business practices that differ from those in the United States. There is risk that our joint venture partners will violate the FCPA or other applicable anti-bribery laws and regulations. While our policies mandate compliance with the FCPA and other anti-bribery laws, as well as economic sanctions, we cannot provide assurance that our internal control policies and procedures will always protect us from violations committed by our employees, joint venture partners or agents. Violations of the FCPA or other anti-bribery laws, or of economic sanctions laws, or allegations of such violations, could result in lengthy investigations and possibly disrupt our business, lead to criminal and/or civil legal proceedings brought by governmental agencies and/or third parties, result in material fines and legal and other costs and have a material adverse effect on our reputation, business, results of operations, cash flows and financial condition.

Given the competitive nature of our industry, we could be adversely affected by violations of various countries' antitrust, competition and consumer protection laws. These laws generally prohibit companies and individuals from engaging in anticompetitive and unfair business practices. While our policies mandate compliance with these laws, we cannot provide assurance that our internal control policies and procedures will always protect us from violations or reckless or criminal acts committed by our employees, joint venture partners or agents.

Seasonal factors and weather, including the physical impacts of climate changes, can impact the availability, quality and volume of raw materials that we process and negatively affect our operations.

The quantity of raw materials available to us is impacted by seasonal factors, including holidays, when raw material volumes decline, and cold weather, which can impact the collection of raw materials. In addition, warm weather can adversely affect the quality of raw materials processed and our yield on production due to more rapidly degrading raw materials. In addition to seasonal impacts, depending upon the location of our facilities and those of our suppliers, our operations could be subject to weather impacts, including the physical impacts of climate changes, changes in rainfall patterns, water shortages, changing sea levels, changing storm patterns and intensities and changing temperature levels. Physical damage, flooding, excessive snowfall or drought resulting from changing climate patterns could adversely impact our costs and business operations, the availability and costs of our raw materials, and the supply and demand for our end products. These effects could be material to our results of operations, liquidity or capital resources. The quality and volume of the finished products that we are able to produce could be negatively impacted by unseasonable or severe weather or unexpected declines in the volume of raw materials available during holidays, which in turn could have a material adverse effect on our business, results of operations and financial condition. In addition, severe weather events may also impact our ability to collect or process raw materials or to transport finished products.

Downturns and volatility in global economies and commodity and credit markets could materially adversely affect our business, results of operations and financial condition.

Our results of operations are materially affected by the conditions of the global economies and the credit, commodities and stock markets. Among other things, we may be adversely impacted if our domestic and international customers and suppliers are not able to access sufficient capital to continue to operate their businesses or to operate them at prior levels. A decline in consumer confidence or changing patterns in the availability and use of disposable income by consumers can negatively affect both our suppliers and customers. Declining discretionary consumer spending or the loss or impairment of a meaningful number of our suppliers or customers could lead to declines in either raw material availability or customer demand. Any tightening in credit supply could negatively affect our customers' ability to pay for our products on a timely basis or at all and could result in a requirement for additional bad debt reserves. Although many of our customer contracts are formula-based, continued volatility in the commodities markets could negatively impact our revenues and overall profits. Counterparty risk on finished product sales can also impact revenue and operating profits when customers either are unable to obtain credit or refuse to take delivery of finished products due to market price declines.

Our business may be adversely impacted by fluctuations in exchange rates, which could affect our ability to comply with our financial covenants.

We carry out transactions in a number of foreign currencies, principally the euro, the Canadian dollar, the Chinese renminbi, the Brazilian real, the British pound, the Japanese yen, the Australian dollar and the Polish zloty. To the extent possible, we attempt to match revenues and expenses in each of the currencies in which we operate. However, we will still be exposed to currency fluctuations when we translate the results of our overseas operations into U.S. dollars, our reporting currency, in the preparation of our consolidated financial statements. The exchange rates between these currencies and the U.S. dollar may fluctuate and these fluctuations may affect our U.S. dollar-denominated results of operations and financial condition even if our underlying operations and financial condition, in local currency terms, remain unchanged. While we have entered into and may from time to time enter into the use of currency hedging instruments to provide us with protection from adverse fluctuations in currency exchange rates, there can be no assurance that such instruments will successfully protect us from more pronounced swings in such exchange rates. Further, by utilizing these instruments we potentially forego the benefits that might result from favorable fluctuations in currency exchange rates.

We also face risks arising from the possible future imposition of exchange controls and currency devaluations. Exchange controls may limit our ability to convert foreign currencies into U.S. dollars or to remit dividends and other payments by our foreign subsidiaries located in, or business conducted within, a country imposing such controls. Currency devaluations would result in a diminished value of funds denominated in the currency of the country instituting the devaluation.

Any fluctuations in exchange rates or the imposition of exchange controls or currency devaluation may adversely impact our ability to comply with the financial and other covenants under the documents governing our indebtedness, which could affect our ability to incur indebtedness, pay dividends, make investments or take other actions that might be in our best interest. Should our international operations continue to expand, they will represent a larger part of our business and such exchange rate fluctuations may have a greater impact on our business, financial condition and results of operations.

Our substantial level of indebtedness could adversely affect our financial condition.

As of December 28, 2019, our total indebtedness, including trade debt, was approximately $1.6 billion and we had undrawn commitments available for additional borrowings under the revolving loan facility included as part of our senior secured credit facilities of up to approximately $911.9 million (after giving effect to approximately $39.0 million of revolver borrowing, $3.6 million of outstanding letters of credit and $45.5 million of ancillary facilities). Our high level of indebtedness could have important consequences, including the following:

- making it more difficult for us to satisfy our obligations to our financial lenders and our contractual and commercial commitments;

- limiting our ability to obtain additional financing to fund future working capital, capital expenditures, acquisitions or other general corporate requirements on commercially reasonable terms or at all;
- requiring us to use a substantial portion of our cash flows from operations to pay principal and interest on our indebtedness instead of other purposes, thereby reducing the amount of our cash flows from operations available for working capital, capital expenditures, acquisitions and other general corporate purposes;
- increasing our vulnerability to adverse economic, industry and business conditions;
- exposing us to the risk of increased interest rates as certain of our borrowings are at variable rates of interest;
- increasing our exposure to the impact on our debt level of changes in foreign exchange rate conversion to functional currency;
- limiting our flexibility in planning for, or reacting to, changes in our business and the industry in which we operate;
- placing us at a competitive disadvantage compared to other, less leveraged competitors; and
- increasing our cost of borrowing.

In addition, the indentures that govern our senior notes and the credit agreement governing our senior secured credit facilities contain restrictive covenants that limit our ability to engage in activities that may be in our long-term best interest. Our failure to comply with those covenants could result in an event of default which, if not cured or waived, could result in the acceleration of all our funded indebtedness. See Item 7. "*Management Discussion and Analysis of Financial Condition and Results of Operations*" - "*Senior Secured Credit Facilities*," "*5.25% Senior Notes due 2027*" and "3.625*% Senior Notes due 2026*."

Despite our existing level of indebtedness, we and our subsidiaries may still be able to incur substantially more indebtedness, which could further exacerbate the risks to our financial condition described above.

We and our subsidiaries may be able to incur substantial additional indebtedness in the future, including additional secured indebtedness under the senior secured credit facilities. Although the indentures that govern the senior notes and the credit agreement governing the senior secured credit facilities contain restrictions on our incurrence of additional indebtedness, these restrictions are subject to a number of significant qualifications and exceptions, and the additional indebtedness that could be incurred in compliance with these restrictions could be substantial. To the extent that we or our subsidiaries incur additional indebtedness, the risks associated with our indebtedness, including our possible inability to service our indebtedness, could intensify. See Item 7. "*Management Discussion and Analysis of Financial Condition and Results of Operations*" - "*Senior Secured Credit Facilities*," "*5.25% Senior Notes due 2027*" and "3.625*% Senior Notes due 2026*."

We may not be able to generate sufficient cash to service all of our indebtedness and may be forced to take other actions to satisfy our obligations under our indebtedness, which may not be successful.

Our ability to make scheduled payments on or to refinance our debt obligations depends on our financial condition and operating performance, which are subject to prevailing economic and competitive conditions and to certain financial, business, legislative, regulatory and other factors beyond our control. We may be unable to maintain a level of cash flows from operating activities sufficient to permit us to pay the principal, premium, if any, and interest on our indebtedness.

If our cash flows and capital resources are insufficient to fund our debt service obligations and to meet our other cash needs, we could be forced to reduce or delay investments and capital expenditures or to dispose of material assets or operations, seek additional debt or equity capital or restructure or refinance our indebtedness. We may not be able to effect any such alternative measures, if necessary, on commercially reasonable terms or at all and, even if successful, such alternative actions may not allow us to meet our scheduled debt service obligations and our other cash needs. The credit agreement governing our senior secured credit facilities and the indentures governing our senior notes restrict our ability to use the proceeds from the disposition of assets, debt incurrence or sales of equity to repay other indebtedness when it becomes due. We may not be able to consummate any such dispositions or to obtain debt or equity proceeds in amounts sufficient to meet any debt service obligations then due, and we may be restricted under the credit agreement governing our senior secured credit facilities or the indentures governing our senior notes from using any such amounts to service other debt obligations.

If we cannot make scheduled payments under any of the agreements governing our debt, we would be in default under such agreements, which could allow lenders under any credit facilities to terminate their commitments to loan money and could allow the applicable lenders or other debt holders to declare all outstanding principal and interest of such debt to be immediately due and payable, and, in the case of secured debt, to foreclose against the assets securing such debt and apply the proceeds from such foreclosure to repay amounts owed to them. Any of these events would likely in turn trigger cross-acceleration or cross-default provisions in our other debt instruments, which would allow the creditors under those instruments to exercise similar rights. If any of these actions are taken, we could be forced into restructuring, bankruptcy or liquidation.

Our ability to repay our indebtedness depends in part on the performance of our subsidiaries, including our non-guarantor subsidiaries, and their ability to make payments.

We conduct a significant portion of our operations through our subsidiaries, a number of which operate outside the United States. Accordingly, repayment of our indebtedness is dependent, to a significant extent, on the generation of cash flow by our subsidiaries and their ability to make such cash available to us. Unless they are guarantors of the indebtedness, our subsidiaries do not have any obligation to pay amounts due on the indebtedness or to make funds available for that purpose. Under certain circumstances, legal and contractual restrictions may limit our ability to obtain cash from our subsidiaries. For example, our subsidiaries that are organized under the laws of, and operate in, China currently have substantial regulatory restrictions on their ability to make cash available to us. While the credit agreement governing the senior secured credit facilities, the indentures governing our senior notes and the agreements governing certain of our other indebtedness will limit the ability of certain of our subsidiaries to incur consensual restrictions on their ability to make other intercompany payments to us, these limitations are subject to certain significant qualifications and exceptions.

Our business may be negatively impacted by the occurrence of any disease correctly or incorrectly linked to animals.

The emergence of diseases such as swine influenza viruses (collectively known as “Swine Flu”) and highly pathogenic strains of avian influenza (collectively known as “Bird Flu”) and severe acute respiratory syndrome (“SARS”) that are in or associated with animals and have the potential to also threaten humans has created concern that such diseases could spread and cause a global pandemic. Swine Flu is quite common among pigs and is generally not fatal. However, Swine Flu strains are often transmitted to humans and have resulted in fatalities. Bird Flu generally refers to highly aggressive and fatal diseases of birds caused by flu viruses that, once established, can spread rapidly from flock to flock and have also been known to affect humans. As of the date of this report, various strains of Bird Flu have been and continue to be reported in wild fowl and commercial poultry in Europe, North America, the Middle East and parts of Asia. Reports that these Bird Flu strains can be spread from person to person have been rare and have regarded potential transmission as inefficient and not sustained.

Other diseases that are highly contagious within a species, but do not affect other animals and are not transmissible to humans, such as porcine epidemic diarrhea (“PED”) virus, may significantly impact production of the susceptible livestock or poultry species in a country or region. African Swine Fever (“ASF”) is a viral and highly contagious disease of pigs and wild boar, for which no cures or approved vaccines are available as of the date of this report. In early August 2018, ASF was reported in domestic pig herds located in Northeast China and has since become widespread, infecting multiple Chinese and Vietnamese provinces and has been reported in Cambodia, Laos, Myanmar, The Philippines, Timor-Leste and Indonesia in South East Asia and the People's Democratic Republic of Korea, Republic of Korea and Mongolia in East Asia. In 2019, the Chinese Ministry of Agriculture and Rural Affairs (“MARA”) addressed measures to control the disease in the “ASF Epidemic Emergency Implementation Plan”. The MARA subsequently released guidelines for restocking farms depopulated because of ASF and a three-year plan for accelerating recovery and development of swine production in China. The restrictions in transportation implemented to control the spread of ASF have created serious dislocations in pork supplies and resulted in strong reduction of slaughter numbers and thereby volumes of raw material supplied to our locations in China that process blood and make collagen from pork skins. Additionally, the perception, real or implied, that blood meal and dried plasma powder may contribute to the spread of ASF, resulted in a temporary ban on the use of porcine plasma in pork feed which negatively affected demand for our products as ingredients in porcine animal feed in China. This ban has now been lifted and porcine plasma is once again allowed to be used in pork feed provided that certain newly established guidelines are met. ASF has also been reported in Eastern Europe since 2007, predominantly in wild boar and to a limited extent in domestic pigs. It spread over long distance to Western Europe, where since September 2018 numerous cases have been detected in wild boar in Belgium. In December 2019, Poland reported 55 outbreaks of ASF in wild boar near the German border. On February 6, 2020, the Agriculture Ministry in Greece reported that ASF had been detected on a breeding farm in Northern Greece. This was the first case reported in the country. Prior to the detection in Greece, the spread of ASF in Western Europe had been restricted to wild animals only. As of the date of this report, this spread in Europe has been restricted to wild animals only. As of the date of this report, ASF has not been reported in North or South America. In the United States, the Animal and Plant Health Inspection Service (APHIS) has implemented a surveillance plan for AFS to strengthen detection capabilities, enhance outbreak preparedness and support claims that ASF is not present in the United States. ASF does not infect humans and is not considered a food safety hazard. Any reports, proven or perceived, that implicate animal feed or feed ingredients, including but not limited to animal by-products, as contributing to the spread of a contagious animal disease could negatively affect demand for our products as ingredients in animal feeds in the affected country or region.

Although no global disease pandemic among humans has been linked to Bird Flu or other emerging diseases as of the date of this report, governments may be pressured to address these concerns, including by executive action such as temporarily closing certain businesses, including meat and animal processing facilities, within their jurisdictions suspected of contributing to the spread of such diseases or by legislative or other policy action, such as prohibiting imports of animals, meat and animal by-products from countries or regions where the disease is detected or suspected. If any disease that is correctly or incorrectly linked to animals and has a negative impact on meat or poultry consumption or animal production occurs in any jurisdiction in which we operate, such occurrence could have a material negative impact on the volume of raw materials available to us or the demand for our finished products.

Our business may be affected by the impact of animal related disease, such as BSE and other food safety issues.

The FDA has put in place restrictions to prevent the spread of BSE, and certain foreign governments have also restricted exports of beef and beef products from the United States following the detection of BSE in the United States in December 2003. The sixth and most recent case of BSE was reported in a six-year-old mixed-breed beef cow on August 29, 2018. This was the second such case of BSE since the World Organization for Animal Health (the "OIE") characterized the United States' BSE status as one of "negligible risk" in 2013. This latest case and the previous four cases were the atypical or sporadic form of BSE, which is not spread via feed and, therefore, did not affect the "negligible BSE risk" status of the U.S. Continued concern about BSE in the United States, and other countries in which we operate now or in the future, may result in additional regulatory and market related challenges that may affect our operations or increase our operating costs.

With respect to human food, pet food and animal feed safety in the United States, the FDA Food Safety Modernization Act ("FSMA") was enacted on January 4, 2011 and gave the FDA new authorities, which became effective immediately, and directed the FDA to promulgate new regulations pursuant to the FSMA. Included among these new authorities and regulations are:

- Mandatory recall authority for adulterated or misbranded foods where the use of or exposure to such foods is likely to cause serious adverse health consequences or death to humans or animals, if the responsible party fails to cease distribution and recall such adulterated or misbranded foods voluntarily. The FDA issued guidance on its mandatory recall authority in November 2018.

- Regulations that define the FDA's administrative detention authority to include the authority to detain an article of food if there is reason to believe the food is adulterated or misbranded.

- Section 306 of the FSMA provides that the FDA must refuse admission of food into the United States if a foreign food establishment or foreign government refuses to permit entry for an inspection. In December 2017, FDA issued draft guidance on what actions constitute refusal of inspection.

- Section 102 of the FSMA amended facility registration requirements in the Federal Food, Drug and Cosmetic ("FD&C") Act for domestic and foreign manufacturers, processors, packers or holders of food for human or animal consumption, to require that facility registrations be renewed during the fourth quarter of each even-numbered year, beginning October 1, 2012, and that additional information be included in such registrations. FSMA also provides that, if the FDA determines that food manufactured, processed, packed, received, or held by a registered facility has a reasonable probability of causing serious adverse health consequences or death to humans or animals, the FDA may suspend the registration of a facility that created, caused, or was otherwise responsible for such reasonable probability, or knew or had reason to know of such probability and packed, received, or held the food.

- The FDA issued final rules for preventive controls ("PCs") for human food and animal feed ("Human Food PC Rule" and "Animal Food PC Rule," respectively), which apply to registered FDA facilities that manufacture, process, pack and hold human or animal food and require these facilities to establish and implement written food safety plans, which include hazard analyses, PCs to ensure that significant hazards that are identified as needing to be controlled will be significantly reduced or prevented, monitoring of PCs, supply-chain controls if appropriate to control a significant hazard, recall plans, corrective action procedures, verification activities and record keeping standards. The Human Food PC Rule also updates existing Current Good Manufacturing Practices ("CGMPs"), and the Animal Food PC Rule establishes minimum CGMPs for the production, holding and distribution of the human or animal food. The FDA has issued various guidance and draft guidance documents to help food facilities comply with requirements under these final rules.

- The FDA issued a regulation relating to Foreign Supplier Verification Programs ("FSVP Rule") requiring that importers of both human and animal food must develop, follow and maintain written procedures verifying that their foreign suppliers produce food in a manner that provides the same level of public health protection as the Human Food PC Rule, Animal Food PC Rule, or FDA's regulations established under FSMA regarding produce safety, as appropriate, and must ensure that the suppliers' food is not adulterated and is not misbranded with respect to allergen labeling of human food. The FDA has issued various guidance documents to assist importers in complying with the FSVP Rule.

- Pursuant to the Sanitary Food Transportation Act of 2005 and FSMA, the FDA requires that sanitary transportation practices be used to transport human and animal foods to prevent such food from being adulterated during transport and applies to shippers, loaders, carriers by motor vehicle or rail vehicle, and receivers engaged in the transportation of food.

- The FDA finalized a rule that requires registered human food facilities to conduct a vulnerability assessment and implement mitigation strategies, including a written food defense plan, to prevent or mitigate potential acts of intentional adulteration of food that could harm the public health. Most large businesses were required to comply with the rule by July 26, 2019, and the FDA issued revised draft guidance in March 2019 to assist covered businesses with compliance.

We have followed regulations enacted under the FSMA throughout the rulemaking process and have implemented CGMPs, food safety plans and other procedures at our domestic facilities, which we believe comply with the applicable final Human Food PC Rule or Animal Food PC Rule. Similar procedures have been implemented at our foreign facilities for compliance with the FSVP Rule. Such rulemaking and implementation of compliant procedures could, among other things, limit our ability to import necessary raw materials or finished products or require us to amend certain of our other operational policies and procedures. Unforeseen issues and requirements may arise as the FDA implements and enforces these and other final rules or promulgates other new regulations provided for by the FSMA.

The FDA has also established a Reportable Food Registry ("RFR") pursuant to the Food and Drug Administration Amendments Act of 2007 (the "FDAAA"). The guidance documents define a reportable food, which the manufacturer or distributor would be required to report in the RFR, to include materials used as ingredients in animal feeds and pet foods, if there is a reasonable probability that the use of, or exposure to, such materials will cause serious adverse health consequences or death to humans or animals. Finalization of the RFR guidance documents and potential additional requirements relating to the RFR may impose additional requirements on us.

In July 2013, the FDA released the "Compliance Policy Guide Sec. 690.800, *Salmonella* in Food for Animals" (the "CPG"). According to the CPG, any finished pet food contaminated with any species of *Salmonella* will be considered adulterated and the FDA believes regulatory action is warranted in cases involving such pet foods because of the heightened risk to humans given the high likelihood of direct human contact with the pet food. Finished animal feeds intended for pigs, poultry and other farmed animals, however, will be considered to be adulterated only if the feed is contaminated with a species of *Salmonella* that is considered to be pathogenic for the animal species for which the feed is intended. Any pathogen, such as *Salmonella*, that is correctly or incorrectly associated with our finished products could have a negative impact on the demand for our finished products and could have a material adverse effect on our business, reputation, results of operations or financial condition.

As a result of our international operations, we could be adversely affected by additional non-U.S. regulations regarding BSE and other food safety issues. For example, an enforceable ban on the feeding of restricted animal material to ruminant animals was introduced in Australia in 1996. This ban is part of a comprehensive national program to prevent the entry and establishment of the BSE agent in Australia. Inspections and audits are undertaken to ensure compliance. In addition, in the EU, harmonized rules have been adopted for prevention, control and eradication of transmissible spongiform encephalopathies ("TSEs"), which includes BSE, in Regulation (EC) No 999/2001, as amended ("TSE Regulation") and in other instruments such as Regulation (EC) No 1069/2009 on animal by-products, as amended ("Animal By-Products Regulation") and food and other feed hygiene regulations. The TSE Regulation establishes a "feed ban," which is the basic preventive measure against TSE and consists of a ban on the use of processed animal protein ("PAP"), such as MBM, in feed for farmed animals. Only certain animal proteins considered to be safe (such as fishmeal) can be used, but under very strict conditions. Other animal-derived products besides PAP, such as collagen derived from non-ruminants and hydrolyzed protein derived from parts of non-ruminants or from ruminant hides and skins, are not subject to the "feed ban." In June 2013, the "feed ban" was lifted for the feeding of aquaculture animals, and the European Commission has been investigating the options to lift the ban for other non-ruminants, such as pigs and poultry.

Although Darling Ingredients International may profit from the possible lifting of the ban for pigs and poultry, changes to the "feed ban" may adversely affect Darling Ingredients International, possibly restricting the allowed use of some of their products. The TSE Regulation applies to the production and placing on the market of live animals and products of animal origin on the EU market. For that purpose, the BSE status of EU Member States, non-EU members of the European Economic Area and other countries or regions ("Third Countries") is to be determined by classification into one of three categories depending on the BSE risk involved: a negligible risk, a controlled risk or an undetermined risk. This classification is made by the OIE. The determination of BSE status is based on a risk assessment and the implementation of a surveillance program. For each risk category there are trade rules to provide the necessary guarantees for protecting public and animal health. Currently, the following EU Member States are classified as having a controlled BSE risk: France, Greece and Ireland. The other EU Member States are classified as having a negligible BSE risk. A change in the BSE status of one or more EU Member States may have a negative impact on Darling Ingredients International. Under EU legislation, imported products from outside the EU must meet the same safety standards as products produced in EU Member States. Therefore, the TSE Regulation imposes strict import requirements related to TSEs for live animals and animal by-products, such as full traceability of imported animals and animal by-products, a ban on the use of MBM in feed for ruminants and the prohibition of the import of specified risk material or mechanically recovered meat. The detailed import requirements depend on the BSE status of Third Countries. The Animal By-Products Regulation establishes rules intended to prevent the outbreak of certain diseases such as BSE. The Animal By-Products Regulation imposes, for example, rules for the use and disposal of specified risk material and other high risk material. A BSE outbreak or other event viewed as hazardous to animal or human health could lead to the adoption of more stringent rules on the use and disposal of animal by-products, which could require Darling Ingredients International to change its production processes and could have a material adverse effect on our business, results of operations or financial condition.

In addition, the introduction of new EU legislation applicable to the agri-food sector could create additional compliance requirements and enforcement risks for us. Regulation (EU) 2019/1381 ("Food Transparency Regulation") was adopted on June 20, 2019 and will apply from 27 March 2021. The Food Transparency Regulation strengthens transparency requirements in EU food law. Among other things, the European Food Safety Authority ("EFSA") will be required to disclose scientific data, studies and other information supporting applications, including supplementary information supplied by applicants, taking into account the protection of confidential information and of personal data. EFSA is tasked with establishing and managing a publicly accessible database of studies commissioned or carried out by business operators to support an application or notification in relation to which EU law contains provisions for EFSA to provide a scientific output, including a scientific opinion. Business operators will need to notify EFSA of the title and the scope of any study commissioned or carried out by them to support an application or a notification, as well as the laboratory or testing facility carrying out that study, and its starting and planned completion dates. Any potential disclosure of unfavorable studies and data as well as EFSA's ultimate decision-making power to determine what constitutes confidential information (and therefore subject or not to transparency obligations) may result in adverse publicity, negatively impact our reputation and/or require us to disclose commercially sensitive information and data. Regulation (EC) No 2017/625 (replacing Regulation (EC) No 882/2004) ("Official Controls Regulation") was adopted on March 15, 2017 and has applied in the EU since December 14, 2019, providing a revised framework for EU Member States to verify compliance with agri-food chain rules through official controls. The scope of the Official Controls Regulation has been extended and will now cover official controls to verify compliance with food and feed law, animal health and welfare, plant health and animal-by products rules. The extension of the scope to also cover plant health and animal by-products as well as organics and plant protection products, is intended to introduce a more harmonized and coherent approach to official controls and relevant enforcement actions along the entire agri-food chain. To deter fraudulent practices, the Official Controls Regulation introduces more stringent rules for financial penalties, imposed by Member States. Those penalties will need to reflect the economic advantage of the operator or a percentage of the operator's turnover. The Regulation also introduces new provisions to protect whistle-blowers to encourage and facilitate the reporting of non-compliance. More stringent and higher financial penalties may potentially result in significant and unexpected costs and enhanced provisions regarding whistle-blowers may result in more regulatory investigations and enforcement actions, both of which could have a material adverse effect on our business.

We have significant international sales and operations and face risks related to health epidemics which could adversely affect our business and results of operations.

In addition to the risks associated with any animal-related diseases (*see* "*Our business may be negatively impacted by the occurrence of any disease correctly or incorrectly linked to animals.*" and "*Our business may be affected by the impact of animal related disease, such as BSE and other food safety issues.*"), our business and operations could be materially and adversely affected by the effects of a widespread outbreak of a contagious disease, including the recent outbreak of the respiratory illness caused by a coronavirus strain (COVID-19) first identified in Wuhan, Hubei Province, China, or any other outbreak of contagious diseases, and other adverse public health developments. These effects could include disruptions or restrictions on our employees' ability to travel, as well as temporary closures of our facilities or the facilities of our customers, suppliers, or other vendors in our supply chain. Certain of our facilities in China have experienced disruptions in operations due to the coronavirus.

Large capital projects can take many years to complete, and market conditions could deteriorate over time, negatively impacting project returns.

We may engage in capital projects, such as the DGD Joint Venture expansion projects, based on the forecasted project economics and level of return on the capital to be employed in the project. Large-scale projects take many years to complete, and market conditions can change from our forecast. As a result, we may be unable to fully realize our expected returns, which could negatively impact our financial condition, results of operations, and cash flows.

If we or our customers are the subject of product liability or other claims or product recalls we may incur significant and unexpected costs and our business reputation could be adversely affected.

We and our customers for whom we manufacture products may be exposed to product liability or other claims, product recalls and adverse public relations if consumption or use of our products is alleged to cause injury or illness to humans or animals. In addition, we and our customers may be subject to product liability or other claims, product recalls, and adverse public relations resulting from developments relating to the discovery of unauthorized adulterations to food additives or other products or from allegations that our food ingredients or other products were mislabeled, were not produced in accordance with the customer's specifications and/or have not performed adequately in the end product, even where food safety or other product safety is not a concern. In some cases, we indemnify our customers for product liability and other claims related to our products. Product recalls in one jurisdiction may result in product recalls in other jurisdictions, as is the case in the EU, where an EU Member State could recall a product in connection with the recall of such product in another EU Member State. Our insurance may not be adequate to cover all liabilities we incur in connection with product liability and/or other claims, whether or not legitimate, or product recalls, whether voluntary or mandatory. We may not be able to maintain our existing insurance or obtain comparable insurance at a reasonable cost for such matters. A judgment against us or against one of our customers for whom we manufacture or provide products on a product liability or other claim, or our or their agreement to settle a product liability or other claim, or a product recall, could also result in substantial and unexpected expenditures, which would reduce operating income and cash flow. In addition, even if product liability or other claims against us or our customers for whom we manufacture products are not successful or are not fully pursued, defending these claims would likely be costly and time-consuming and may require management to spend time defending the claims which takes time away from operating our business. Any such claim could also result in adverse publicity and negatively impact our reputation.

Product liability or other claims, product recalls or any other events that cause consumers to no longer associate our brands or those of our customers for whom we manufacture products with high quality and safety may harm the value of our and their brands and lead to decreased demand for our products. In addition, as a result of any such claims against us or product recalls, we may be exposed to claims by our customers for damage to their reputations and brands. Product liability or other claims and product recalls may also lead to increased scrutiny or investigations by federal, state and foreign regulatory agencies of our operations and could have a material adverse effect on our brands, business, results of operations and financial condition.

Changes in consumer preference could negatively impact our business.

The food and pet food industries in general are subject to changing consumer trends, demands and preferences. Trends within the food and pet food industries change often, and failure to identify and react to changes in these trends could lead to, among other things, reduced demand and price reductions for our products or those of our customers for whom we manufacture products, and could have an adverse effect on our financial results.

Our operations are subject to various laws, rules and regulations relating to the protection of the environment and to health and safety, and we could incur significant costs to comply with these requirements or be subject to sanctions or held liable for environmental damages.

Our operations subject us to various and increasingly stringent environmental, health and safety requirements in the various jurisdictions where we operate, including those governing air emissions, wastewater discharges, the management, storage and disposal of materials in connection with our facilities, occupational health and safety, product packaging and labeling and our handling of hazardous materials and wastes, such as gasoline and diesel fuel used by our trucking fleet and operations. Failure to comply with these requirements could have significant consequences, including recalls, penalties, injunctive relief, claims for personal injury and property and natural resource damages, other claims and negative publicity. Our operations require the control of air emissions and odor and the treatment and discharge of wastewater to municipal sewer systems and the environment. We operate boilers at many of our facilities and store wastewater in lagoons or, as permitted, discharge it to publicly owned wastewater treatment systems or surface waters, or through land application. We have incurred significant capital and operating expenditures to comply with environmental requirements, including for the upgrade of wastewater treatment facilities, and will continue to incur such costs in the future.

We could be responsible for the remediation of environmental contamination and may be subject to associated liabilities and claims for personal injury and property and natural resource damages. We own or operate numerous properties, have been in business for many years and have acquired and disposed of properties and businesses over that time. During that time, we or other owners or operators may have generated or disposed of wastes or stored or handled other materials that are or may be considered hazardous or may have polluted the soil, surface water or groundwater at or around our facilities. Under some environmental laws, such as the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 in the United States, also known as the Superfund law, responsibility for the cost of cleanup of a contaminated site can be imposed upon current or former site owners and operators, or upon any party that sent waste to the site, regardless of the lawfulness of the activities that led to the contamination. Similar laws outside the United States impose liability for environmental cleanup, often under the polluter pays theory of liability but also based upon ownership in some circumstances. There can be no assurance that we will not face extensive costs or penalties that would have a material adverse effect on our financial condition and results of operations. For example, we have received notice from the EPA relating to alleged river sediment contamination in the Lower Passaic River area of New Jersey. See Item 3. "*Legal Proceedings.*" In addition, future developments, such as more aggressive enforcement policies, new laws or discoveries of currently unknown contamination conditions, may also require expenditures that may have a material adverse effect on our business and financial condition.

In addition, increasing efforts to control emissions of GHG are likely to impact our operations. We operate in certain jurisdictions subject to the Paris Agreement, which mandates reduced GHG emissions in certain participating countries, and the EPA's rule establishing mandatory GHG reporting for certain activities may apply to some of our facilities if we exceed the applicable thresholds. The EPA has also announced a regulatory endangerment finding relating to GHG emissions that has led to further regulation of GHG emissions. Legislation to regulate GHG emissions has periodically been proposed in the U.S. Congress and a growing number of states and foreign countries are taking action to require reductions in GHG emissions. Future GHG emissions limits may require us to incur additional capital and operational expenditures. EPA regulations limiting exhaust emissions also have become more restrictive, and the National Highway Traffic Safety Administration and the EPA have adopted regulations that govern fuel efficiency and GHG emissions. Compliance with these and similar regulations could increase the cost of new fleet vehicles and increase our operating expenses. Compliance with future GHG regulations may require expenditures that could materially adversely affect our business, results of operations and financial condition.

We have approximately 10,100 employees world-wide and are subject to a wide range of local, provincial and national laws and regulations governing the health and safety of workers, including, for example, OSHA in the United States. We can be subject to potential fines and civil and, in egregious cases, criminal actions if we are found to be in violation of worker health and safety laws in any of these jurisdictions. Further, as such laws and regulations change, we may sometimes be required to commit to unplanned capital expenditures in order to continue to comply with workplace safety requirements at our facilities. In addition, we operate and maintain an extensive vehicle fleet to transport products to and from customer locations in all jurisdictions where we have facilities. Our fleets and drivers are subject to federal, state, local and foreign laws and licensing requirements applicable to commercial fleets, their cargo and their hours and methods of operation. Failure to comply with these laws and regulations in any location could materially adversely affect our business, results of operations, financial condition and reputation.

If we experience difficulties or a significant disruption in our information systems or if we fail to implement new systems and software successfully, our business could be materially adversely affected.

We depend on information systems throughout our business to collect and process data that is critical to our operations and accurate financial reporting. Among other things, these information systems process incoming customer orders and outgoing supplier orders, manage inventory, and allow us to efficiently collect raw materials and distribute products, process and bill shipments to and collect cash from our customers, respond to customer and supplier inquiries, contribute to our overall internal control processes, maintain records of our property, plant and equipment, record and pay amounts due vendors and other creditors and manage our human resource function.

If we were to experience a disruption in our information systems that involve interactions with suppliers and customers, it could result in a loss of raw material supplies, sales and customers and/or increased costs, which could have a material adverse effect on our business, financial condition and results of operations. In addition, any such disruption could adversely affect our ability to meet our financial reporting obligations. We may also encounter difficulties in developing and implementing new systems or maintaining and upgrading existing systems and software. Such difficulties may lead to significant expenses or losses due to unexpected additional costs required to implement or maintain systems, disruption in business operations, loss of sales or profits, or cause us to incur significant costs to reimburse third parties for damages, and, as a result, may have a material adverse effect on our results of operations and financial condition. We could also experience impairment of our reputation if any of these events were to occur.

Increased information technology security threats and more sophisticated computer crime pose a risk to our systems, networks, products and services.

We rely upon our information systems and networks in connection with a variety of business activities, and we collect and store sensitive data. Increased security threats to information systems and more sophisticated computer crime pose a risk to the security of our systems and networks and the confidentiality, availability and integrity of our data. We are the subject of cyber attacks from time to time, and must invest resources to protect our systems and defend against and respond to incidents. A failure of or breach in technology security could expose us and our customers and suppliers to risks of misuse of information or systems, the compromising of confidential information, manipulation and destruction of data, defective products, production downtimes and operating disruptions, which in turn could adversely affect our reputation, competitive position, business and results of operations. In addition, such breaches in security could result in litigation, regulatory action and potential liability and the costs and operational consequences of implementing further data protection measures.

Furthermore, we are subject to complex and evolving laws and regulations regarding privacy, know-your-customer requirements, data protection, cross-border data movement and other matters. Principles concerning the appropriate scope of consumer and commercial privacy vary considerably in different jurisdictions, and regulatory and public expectations regarding the definition and scope of consumer and commercial privacy may remain fluid. It is possible that these laws may be interpreted and applied by various jurisdictions in a manner inconsistent with our current or future practices or inconsistent with one another. If personal, confidential or proprietary information of customers or employees in our possession is mishandled or misused, we may face regulatory, reputational and operational risks which could have an adverse effect on our financial condition and results of operations. For example, European legislators adopted the General Data Protection Regulation (“GDPR”) that became effective in May 2018, and supersedes EU data protection legislation, imposes more stringent data protection requirements, and provides for greater penalties for noncompliance. There are significant outstanding questions relating to the scope and applicability of GDPR for companies such as ours. We may face difficulty in fully complying with these regulations and any failure to do so could subject us to significant monetary penalties, liabilities, and adverse publicity. Further, California recently enacted a privacy law (the “California Consumer Privacy Act” or “CCPA”), which may limit how we may collect and use personal data, and which came into effect in January 2020. As the law is new and draft regulations have not yet been finalized, and additional state privacy laws may be enacted the impact of these State privacy on us and others in our industry is uncertain. We also may be required to expend significant resources to prepare for and comply with the evolving standards. We could be adversely affected if the CCPA and other states’ legislation or regulations require changes in our business practices or privacy policies, or if governing jurisdictions interpret or implement their legislation or regulations in ways that negatively affect our business, financial condition and results of operations.

Our success is dependent on our key personnel.

Our success depends to a significant extent upon a number of key employees, including members of senior management. The loss of the services of one or more of these key employees could have a material adverse effect on our results of operations and prospects. We believe that our future success will depend in part on our ability to attract, motivate and retain skilled technical, managerial, marketing and sales personnel. Competition for these types of skilled personnel is intense and there can be no assurance that we will be successful in attracting, motivating and retaining key personnel. The failure to hire and retain such personnel could materially adversely affect our business, results of operations and financial condition.

In certain markets we are highly dependent upon a single operating facility and various events beyond our control could cause an interruption in the operation of our facilities, which could adversely affect our business in those markets.

Our facilities are subject to various federal, state, provincial and local environmental and other permitting requirements of the countries in which we operate, depending on the locations of those facilities. Periodically, these permits may be reviewed and subject to amendment or withdrawal. Applications for an extension or renewal of various permits may be subject to challenge by community and environmental groups and others. In the event of a casualty, condemnation, work stoppage, permitting withdrawal or delay, severe weather event, or other unscheduled shutdown involving one of our facilities, in a majority of our markets we would utilize a nearby operating facility to continue to serve our customers in the affected market. In certain markets, however, we do not have alternate operating facilities. In the event of a casualty, condemnation, work stoppage, permitting withdrawal or delay, severe weather event or other unscheduled shutdown in these markets, we may experience an interruption in our ability to service our customers and to procure raw materials, and potentially an impairment of the value of that facility. Any of these circumstances may materially and adversely affect our business and results of operations in those markets. In addition, after an operating facility affected by a casualty, condemnation, work stoppage, permitting withdrawal or delay or other unscheduled shutdown is restored, there could be no assurance that customers who in the interim choose to use alternative disposal services would return to use our services.

We could incur a material weakness in our internal control over financial reporting that would require remediation.

Any future failures to maintain the effectiveness of our disclosure controls and procedures, including our internal control over financial reporting, could subject us to a loss of public confidence in our internal control over financial reporting and in the integrity of our financial statements and our public filings with the SEC and other governmental agencies and could harm our operating results or cause us to fail to meet our regulatory reporting obligations in a timely manner.

Changes in our tax rates or exposure to additional income tax liabilities could impact our profitability.

We are subject to income taxes in the United States and in numerous other foreign jurisdictions. Due to economic and political conditions, tax rates in various jurisdictions, including the United States, may be subject to change. Our future effective tax rates could be adversely affected by changes in the mix of earnings by jurisdictions with differing statutory tax rates, changes in the valuation of deferred tax assets and liabilities and changes in tax laws or tax rates. Tax reform enacted in the United States in 2017 included changes to U.S. federal income tax rates, imposed significant additional limitations on the deductibility of business interest expense and net operating losses and put into effect a number of changes impacting operations outside the United States. While we have reflected the expected impact of the new law in our financial statements in accordance with our understanding of U.S. tax reform and available guidance, the ultimate effects of U.S. tax reform remain uncertain and there may be further impacts of the new law. In particular, additional regulations and guidance may be issued (possibly with retroactive effect) that could significantly impact how the new law applies to us and resulting changes could have an adverse effect on us, and such effect could be material. In particular, it is uncertain if, and to what extent, various states will conform to the new tax law and foreign countries will react by adopting tax legislation or taking other actions that could adversely affect our business. In addition, the amount of income taxes we pay is subject to ongoing audits in various jurisdictions and a material assessment by governing tax authority could affect our profitability.

An impairment in the carrying value of our goodwill or other intangible assets may have a material adverse effect on our results of operations.

As of December 28, 2019, the Company had approximately $1.2 billion of goodwill. We are required to annually test goodwill to determine if impairment has occurred. Additionally, impairment of goodwill must be tested whenever events or changes in circumstances indicate that impairment may have occurred. If the testing performed indicates that impairment has occurred, we are required to record a non-cash impairment charge for the difference between the carrying value of the goodwill and the implied fair value of the goodwill in the period the determination is made. The testing of goodwill for impairment requires us to make significant estimates about our future performance and cash flows, as well as other assumptions. These estimates can be affected by numerous factors, including changes in economic, industry or market conditions, changes in business operations or regulation, or changes in competition. Changes in these factors, or changes in actual performance compared with estimates of our future performance, may affect the fair value of goodwill, which may result in an impairment charge. For example, a deterioration in demand for, or increases in costs for producing, a supplier's principal products could lead to a reduction in the supplier's output of raw materials, thus impacting the fair value of a plant processing that raw material. We cannot accurately predict the amount and timing of any impairment of assets. Should the value of goodwill become impaired, there may be a material adverse effect on our results of operations.

We may be subject to work stoppages at our operating facilities, which could cause interruptions in the manufacturing or distribution of our products.

While we currently have no international, national or multi-plant union contracts, as of December 29, 2018 approximately 19% of Darling's North American employees, 27% of Rothsay's employees and 44% of Darling Ingredients International's employees were covered by various collective bargaining agreements. Furthermore, local laws and regulations in certain jurisdictions in which we operate provide for worker groups with prescribed powers and rights with regard to working conditions, wages and similar matters. In jurisdictions where such groups do not exist, labor organizing activities could result in additional employees becoming unionized and higher ongoing labor costs. Darling's collective bargaining agreements expire at varying times over the next five years. In contrast, Darling Ingredients International's collective bargaining agreements generally have one to two year terms. Rothsay agreements generally have terms up to three years. Some of our collective bargaining agreements have already expired and are in the process of being renegotiated. There can be no assurance that we will be able to negotiate the terms of any expiring or expired agreement in a manner acceptable to us. If our workers were to engage in a strike, work stoppage, slowdown or other collective action in the future in any of our locations, we could experience a significant disruption of our operations, which could have a material adverse effect on our business, results of operations and financial condition. We may also be subject to general country strikes or work stoppages unrelated to our business or collective bargaining agreements that could have a direct or indirect adverse effect on our business, results of operation or financial condition.

Litigation or regulatory proceedings may materially adversely affect our business, results of operations and financial condition.

We are a party to various lawsuits, claims and loss contingencies arising in the ordinary course of business, including insured worker's compensation, auto, and general liability claims, assertions by certain regulatory and governmental agencies related to permitting requirements and/or air, wastewater and storm water discharges from the Company's processing facilities, litigation involving tort, contract, statutory, labor, employment, and other claims, and tax matters. The outcome of litigation, particularly class action lawsuits, and regulatory proceedings is difficult to assess or quantify. Plaintiffs (including governmental agencies) in these types of lawsuits and proceedings may seek recovery of very large or indeterminate amounts, and the magnitude of the potential loss relating to such lawsuits or proceedings may remain unknown for substantial periods of time. The costs of responding to or defending future litigation or regulatory proceedings may be significant and any future litigation or regulatory proceedings may divert the attention of management away from our strategic objectives. There may also be adverse publicity associated with litigation or regulatory proceedings that may decrease customer confidence in our business, regardless of whether the allegations are valid or whether we are ultimately found liable. As a result, litigation or regulatory proceedings may have a material adverse effect on our business, results of operations and financial condition. For more information related to our litigation and regulatory proceedings, see Item 3. "*Legal Proceedings.*"

Certain U.S. multiemployer defined benefit pension plans to which we contribute are underfunded and these plans and our European pension funds may require minimum funding contributions.

We participate in various U.S. multiemployer pension plans which provide defined benefits to certain employees covered by labor contracts. These plans are not administered by us and contributions are determined in accordance with provisions of negotiated labor contracts to meet their pension benefit obligations to their participants. Based upon the most currently available information, certain of these multiemployer plans are underfunded due partially to a decline in the value of the assets supporting these plans, a reduction in the number of actively participating members for whom employer contributions are required and the level of benefits provided by the plans. In addition, the U.S. Pension Protection Act, which went into effect in January 2008, requires underfunded pension plans to improve their funding ratios within prescribed intervals based on the level of their underfunding. As a result, our required contributions to these plans may increase in the future. Furthermore, under current law, a termination of, our voluntary withdrawal from or a mass withdrawal of all contributing employers from any underfunded multiemployer defined benefit plan to which we contribute would require us to make payments to the plan for our proportionate share of such multiemployer plan's unfunded vested liabilities. Also, if a multiemployer defined benefit plan fails to satisfy certain minimum funding requirements, the Internal Revenue Service ("IRS") may impose a nondeductible excise tax of 5% on the amount of the accumulated funding deficiency for those employers not contributing their allocable share of the minimum funding to the plan. Requirements to pay increased contributions, withdrawal liability and excise taxes could negatively impact our liquidity and results of operations.

In the EU, pension funds are generally subject to the Institution for Occupational Retirement Provision Directive (Directive 2003/41/EC) (the "IORP Directive") as implemented in the relevant EU Member States. The IORP Directive provides for certain general solvency requirements but allows EU Member States discretion to impose specific national requirements. As a result, the solvency of EU pension funds are mostly regulated on a national level. On December 23, 2016, the new IORP Directive ("IORP Directive II") was published on the Official Journal of the European Union and entered into force on January 12, 2017, though this did not make substantive changes to the solvency requirements under the original IORP Directive. The new IORP Directive II recognizes in one of its recitals that changes in this area could potentially decrease the willingness of employers to provide occupational pension schemes. EU Member States were required to implement IORP Directive II into national legislation by January 13, 2019. The UK introduced new legislation with effect from 13 January 2019 to implement certain parts of IORP Directive II: (i) the Occupational Pension Schemes (Governance) (Amendment) Regulations 2018, SI 2018/1103, which implemented the governance provisions; (ii) the Occupational Pension Schemes (Cross-border Activities) (Amendment) Regulations 2018, SI 2018/1102, which implemented the requirements relating to cross-border activity and cross-border transfers; and (iii) the Pension Protection Fund (Pensionable Service) and Occupational Pension Schemes (Investment and Disclosure) (Amendment and Modification) Regulations 2018, SI 2018/988, which (among other things) made amendments to the content requirements of statements of investment principles so as to require trustees to state, from 1 October 2019, their policy on 'financially material considerations'. The UK government considered that the other aspects of IORP Directive II were already adequately covered by the existing UK law. Given that IORP Directive II has already been implemented in UK law, the European Union (Withdrawal) Act 2018 will preserve any legislation made in the UK to implement the obligations under IORP Directive II (including those carried over from the original IORP Directive). That legislation is unlikely to change immediately following Brexit, although there will be scope later on for the UK legislation and regulation to diverge from that of the EU.

The insurance coverage that we maintain may not fully cover all operational risks, and if the number or severity of claims for which we are self-insured increases, if we are required to accrue or pay additional amounts because the claims prove to be more severe than our recorded liabilities, if our insurance premiums increase or if we are unable to obtain insurance at acceptable rates or at all, our financial condition and results of operations may be materially adversely affected.

We maintain property, business interruption and casualty insurance but such insurance may not cover all of the risks associated with the hazards of our business and is subject to limitations, including deductibles and maximum liabilities covered. We may incur losses beyond the limits, or outside the coverage, of our insurance policies, including liabilities for environmental remediation. In the future, the types of insurance we obtain and the level of coverage we maintain may be inadequate or we may be unable to continue to maintain our existing insurance or obtain comparable insurance at a reasonable cost.

Our worker's compensation, auto and general liability policies contain significant deductibles or self-insured retentions. We develop bi-yearly and record quarterly an estimate of our projected insurance-related liabilities. We estimate the liabilities associated with the risks retained by us, in part, by considering historical claims experience, demographic and severity factors and other actuarial assumptions. Any actuarial projection of losses is subject to a degree of variability. If the number or severity of claims for which we are self-insured increases, or we are required to accrue or pay additional amounts because the claims prove to be more severe than our original assessments, our financial condition and results of operations may be materially adversely affected. In addition, in the future, our insurance premiums may increase and we may not be able to obtain similar levels of insurance on reasonable terms or at all. Any such inadequacy of, or inability to obtain, insurance coverage could have a material adverse effect on our business, financial condition and results of operations.

We may not successfully identify and complete acquisitions on favorable terms or achieve anticipated synergies relating to any acquisitions, and such acquisitions could result in unknown liabilities, unforeseen operating difficulties and expenditures and require significant management resources.

We regularly review potential acquisitions of complementary businesses, services or products. However, we may be unable to identify suitable acquisition candidates in the future. Even if we identify appropriate acquisition candidates, we may be unable to complete or finance such acquisitions on favorable terms, if at all. In addition, the process of integrating an acquired business, service or product into our existing business and operations may result in unforeseen operating difficulties and expenditures. Integration of an acquired company also may require significant management resources that otherwise would be available for ongoing development of our business. Moreover, we may not realize the anticipated benefits of any acquisition or strategic alliance and such transactions may not generate anticipated financial results. Future acquisitions could also require us to incur debt, assume contingent liabilities or amortize expenses related to intangible assets, any of which could harm our business. Finally, acquisitions may be structured in such a manner that would result in the assumption of unknown liabilities not disclosed by the seller or uncovered during pre-acquisition due diligence.

We may divest of certain of our brands or businesses from time to time, which could adversely affect us.

We evaluate our business regularly and, from time to time, we may decide to divest ourselves of brands or businesses that do not meet our strategic objectives or do not meet our growth or profitability targets. No assurance can be given that we will be able to divest of a brand or business on favorable terms or without significant costs or that we will be able to achieve the anticipated benefits or cost savings from the divestitures. Any such divestitures may adversely affect our results of operations if we are unable to offset the dilutive impacts from the loss of revenue associated with the divested brands or businesses, or otherwise achieve the anticipated benefits or cost savings from the divestitures. Moreover, we may incur asset impairment charges related to divestitures that reduce our profitability.

Media campaigns related to feed and food ingredient production present reputational and other risks.

Individuals or organizations can use social media platforms to publicize inappropriate or inaccurate stories or perceptions about the feed and food ingredient production industries or our company. Such practices could cause damage to the reputations of our company and/or the feed and food ingredient production industries in general. This damage could adversely affect our financial results.

Terrorist attacks or acts of war may cause damage or disruption to us and our employees, facilities, information systems, security systems, suppliers and customers, which could materially and adversely affect our net sales, costs and expenses and financial condition.

Terrorist attacks, such as those that occurred on September 11, 2001, have contributed to economic instability in the United States and in certain other countries, and further acts of terrorism, bioterrorism, cyberterrorism, violence or war could affect the markets in which we operate, our business operations, our expectations and other forward-looking statements contained in this report. The potential for future terrorist attacks, the U.S. and international responses to terrorist attacks and other acts of war or hostility, including the ongoing conflicts in the Middle East, North Korea and Ukraine, may cause economic and political uncertainties and cause our business to suffer in ways that cannot currently be predicted. Events such as those referred to above could cause or contribute to a general decline in investment valuations. In addition, terrorist attacks, particularly acts of bioterrorism, that directly impact our facilities or those of our suppliers or customers could have an impact on our sales, supply chain, production capability and costs and our ability to deliver our finished products.

We may be unable to protect our intellectual property rights.

We maintain valuable patents, trademarks, service marks, copyrights, trade names, trade secrets, proprietary technologies and similar intellectual property, and consider our intellectual property to be of material value. Our efforts to protect our intellectual property and proprietary rights may not be sufficient. Patents may not be issued for any pending or future patent applications owned by or licensed to us, and the claims allowed under any issued patents may not be sufficiently broad to protect our technology. Any issued patents owned by or licensed to us may be challenged, invalidated or circumvented, and the rights under these patents may not provide us with competitive advantages. In addition, competitors may design around our technology or develop competing technologies. Intellectual property rights may also be unavailable or limited in some foreign countries, which could make it easier for competitors to capture market position in such countries by utilizing technologies that are similar to those developed or licensed by us. If we do not obtain sufficient protection for our intellectual property, or if we are unable to effectively protect our intellectual property rights, our competitiveness could be impaired, which would limit our growth and future revenue. Any litigation to enforce our intellectual property rights, protect our trade secrets or determine the validity and scope of the proprietary rights of others could result in substantial costs and diversion of resources, with no assurance of success.

Our products, processes, methods, and equipment may infringe upon the intellectual property rights of others, which may cause us to incur unexpected costs or prevent us from selling our products.

We have in the past and may in the future be subject to legal proceedings and claims in the ordinary course of our business, including claims of alleged infringement of patents, trademarks and other intellectual property rights of third parties by us or our customers. Any such claims, whether or not meritorious, could result in costly litigation and divert the efforts of our management. Moreover, should we be found liable for infringement, we may be required to enter into licensing agreements (which may not be available on acceptable terms or at all) or to pay damages and cease making or selling certain products. Any of the foregoing could cause us to incur significant costs and prevent us from manufacturing or selling our products and thereby materially adversely affect our business, results of operations and financial condition.

The healthcare reform legislation in the United States and its implementing regulations could impact the healthcare benefits we are required to provide our employees in the United States and cause our compensation costs to increase, potentially reducing our net income and adversely affecting our cash flows.

In March 2010, the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Affordability Reconciliation Act (the “ACA”), was signed into law in the United States. This healthcare reform legislation and its applicable implementing regulations contain provisions that could materially impact our future healthcare costs, including the contributions we are required to make to our benefit plans. In particular, the requirement that we either offer our full-time employees healthcare coverage that satisfies the ACA's affordability and minimum value standards or potentially be subject to an excise tax penalty became effective in calendar year 2015. In addition, beginning in 2016, we had to file information returns with the IRS regarding the health insurance coverage offered to our full-time employees in the prior calendar year and furnish to employees a statement that includes the same information provided to the IRS. While we have timely filed such returns and provided our employees with the required statements to date, failure to do so in the future could expose us to reporting penalties under applicable sections of the Internal Revenue Code. These provisions could reduce our net income and adversely affect our cash flows.

Legislative changes to, or regulatory changes under, all or certain portions of the ACA have been made under the Trump administration and more may be likely. On December 20, 2019, President Trump signed Public Law 116-94, a spending bill that included provisions repealing the so-called “Cadillac” tax on certain high cost employer-sponsored insurance plans and the annual fee imposed on certain health insurance providers based on market share. President Trump also has signed two executive orders and other directives designed to delay the implementation of certain provisions of the ACA or otherwise circumvent some of the requirements for health insurance mandated by the ACA. Concurrently, members of the U.S. Congress have proposed other legislation that would repeal or repeal and replace all or part of the ACA. While Congress has not passed comprehensive repeal legislation, in addition to Public Law 116-94, bills affecting the implementation of certain taxes under the ACA have been signed into law. The Tax Cuts and Jobs Act, passed in December 2017, includes a provision repealing, effective January 1, 2019, the tax-based shared responsibility payment imposed by the ACA on certain individuals who fail to maintain qualifying health coverage for all or part of a year that is commonly referred to as the "individual mandate" (although a few states have adopted individual mandate requirements that assess penalties against individuals based on their uninsured status). There is uncertainty with respect to the impact that the reform proposals from the President's administration and U.S. Congress may have, if any, including whether additional legislative reform will be enacted and whether any proposals will encompass or potentially alter the full-time employee healthcare coverage requirements and reporting obligations imposed on large employers like us. There have also been various litigation challenges to the ACA, some of which are ongoing. The 2020 U.S. Presidential and Congressional elections may also result in unknown changes to healthcare laws. Any changes may likely take time to unfold, and we cannot predict the ultimate content, timing, or effect of any healthcare reform legislation or the impact of potential legislation or related proposals and policies on us. We cannot assure that the ACA, as currently enacted or as repealed or amended in the future, will not adversely affect our business and financial results and we cannot predict how future federal or state legislative or administrative changes relating to healthcare reform will affect our business.

Because of our prior acquisitions and future acquisitions we may engage in, our historical operating results may be of limited use in evaluating our historical performance and predicting our future results.

Darling has acquired a number of businesses in recent years, including Rothsay and VION Ingredients, and we expect that we will engage in acquisitions of other businesses from time to time in the future. The operating results of the acquired businesses are included in our financial statements from the date of the completion of such acquisitions. All of Darling's acquisitions have been accounted for using the acquisition method of accounting. Use of this method has resulted in a new valuation of the assets and liabilities of the acquired companies. We expect a substantial increase in our depreciation and amortization and reduction in our operating and net income commensurate with such increase. As a result of these acquisitions and any future acquisitions, our historical operating results may be of limited use in evaluating our historical performance and predicting our future results.

We may incur significant charges in the event we close or divest all or part of a manufacturing plant or facility.

We periodically assess our manufacturing operations in order to manufacture and distribute our products in the most efficient manner. Based on our assessments, we may make capital improvements to modernize certain units, move manufacturing or distribution capabilities from one plant or facility to another plant or facility, discontinue manufacturing or distributing certain products or close or divest all or part of a manufacturing plant or facility. The closure or divestiture of all or part of a manufacturing plant or facility could result in future charges that could be significant to our business, results of operations and financial condition.

The vote by the United Kingdom mandating its withdrawal from the EU could have an adverse effect on our business, investments and future operations in Europe.

The vote on June 23, 2016 by the United Kingdom (the "UK") to exit the EU, or Brexit, has created uncertainty in the global financial markets, but the eventual effects of the UK's withdrawal from the EU on our business or our investment portfolios are uncertain at this time. On March 29, 2017, the Prime Minister of the UK notified the European Council in accordance with Article 50 of the Treaty on European Union of the UK's intention to withdraw from the EU, triggering a two-year period for the negotiation of the UK's withdrawal from the EU, which period was subsequently extended. The effect of Brexit on our business and investments is uncertain as negotiations commence to determine the future terms of the UK relationship with the EU. The effects of the UK's withdrawal from the EU will depend on agreements the UK makes to retain access to EU markets either during a transitional period or more permanently. Brexit could impair the ability of Darling Ingredients International to transact business in the future in the UK, including by restricting the free travel of employees from and to the UK and through legal uncertainty and potentially divergent national laws and regulations as the UK determines which EU laws to replace or replicate. Furthermore, Brexit is likely to continue to adversely affect European and worldwide economic conditions and could contribute to greater instability in the global financial markets before and after the terms of the UK's future relationship with the EU are settled. These effects could have an adverse effect on our business, investments and future operations in Europe. A withdrawal agreement and a political declaration were agreed at the European Council on October 17, 2019. The UK general election on December 12, 2019 resulted in an absolute majority of seats for the UK Conservative Party in the House of Commons. On January 9, 2020 the House of Commons voted on the European Union (Withdrawal Agreement) Bill 2019-20 (the "Withdrawal Bill"), which paved the way for the UK to leave the EU on January 31, 2020, on its third reading. The Withdrawal Bill covers "divorce" payments to the EU, citizens' rights, customs arrangements for Northern Ireland, and a planned 11-month transition period. The House of Commons approved the Withdrawal Bill by 330 votes to 231, and it was passed by the House of Lords, the UK Parliament's upper house, without further modifications on January 22, 2020. The UK withdrew from the EU at 23:00 GMT on January 31, 2020, and the planned transition period will run from February 1, 2020 to December 31, 2020. During the transition period, the UK will cease to be an EU member but will still follow all of the EU's rules and regulations, and will remain in the single market and the customs union and contribute to the EU budget. This transition period would also see the UK and the EU negotiate a trade agreement that would be likely to commence immediately following the end of the transition period, and provide an opportunity for businesses and the UK government to prepare for the new arrangements. While this transition period may be extended if such an extension is requested before the end of June 30, 2020, the UK's Prime Minister has stated that he will not request an extension. After December 31, 2020 or any later date on which the transition period would end, the relationship between the UK and the EU would be regulated by any trade agreement concluded during the transition period. A 'no-deal' Brexit scenario could still occur. In a no-deal scenario, the loss of the single-market would see the UK fall back on to basic World Trade Organization Terms, which would involve tariffs and checks on UK goods travelling to the EU and vice versa. In the absence of further transitional arrangements with the EU, therefore, there is a greater risk that trade between UK and EU businesses will be materially adversely affected, particularly in relation to highly regulated products such as pharmaceuticals and products of animal-origin, due to the additional regulatory burdens that are likely to be imposed on exporters/importers which may affect the availability of these products.

Risks Related to our Common Stock

The market price of our common stock has been and may continue to be volatile, which could cause the value of your investment to decline.

The market price of our common stock has been subject to volatility and, in the future, the market price of our common stock could fluctuate widely in response to numerous factors, many of which are beyond our control. Numerous factors, including many over which we have no control, may have a significant impact on the market price of our common stock. In addition to the risk factors discussed in this report, the price and volume volatility of our common stock may be affected by:

- actual or anticipated fluctuations in ingredient prices;
- actual or anticipated variations in our operating results;
- our earnings releases and financial performance;
- changes in financial estimates or buy/sell recommendations by securities analysts;
- our ability to repay our debt;
- our access to financial and capital markets to refinance our debt;
- performance of our joint venture investments, including the DGD Joint Venture;
- our dividend policy;
- market conditions in the industry and the general state of the securities markets;
- investor perceptions of us and the industry and markets in which we operate;
- governmental legislation or regulation;
- currency and exchange rate fluctuations that impact our earnings and balance sheet; and
- general economic and market conditions, such as U.S. or global reactions to economic developments, including regional recessions, currency devaluations or political unrest.

Future sales of our common stock or the issuance of other equity may adversely affect the market price of our common stock.

We are not restricted from issuing additional common stock, including securities that are convertible into or exchangeable for, or that represent the right to receive, common stock. The issuance of additional shares of our common stock or convertible securities, including our outstanding options, or otherwise, will dilute the ownership interest of our common stockholders.

Sales of a substantial number of shares of our common stock or other equity-related securities in the public market could depress the market price of our common stock and impair our ability to raise capital through the sale of additional equity securities. We cannot predict the effect that future sales of our common stock or other equity-related securities would have on the market price of our common stock.

Our common stock is an equity security and is subordinate to our existing and future indebtedness.

Shares of our common stock are equity interests and do not constitute indebtedness. As such, the shares of common stock will rank junior to all of our indebtedness, including our trade debt, and to other non-equity claims on us and our assets available to satisfy claims on us, including claims in a bankruptcy, liquidation or similar proceedings. Our existing indebtedness restricts, and future indebtedness may restrict, payment of dividends on the common stock.

Unlike indebtedness, where principal and interest customarily are payable on specified due dates, in the case of common stock, (i) dividends are payable only when and if declared by our board of directors or a duly authorized committee of the board and (ii) as a corporation, we are restricted under applicable Delaware law to making dividend payments and redemption payments only from legally available assets. Further, under our certificate of incorporation, there are no restrictions on our business or operations or on our ability to incur indebtedness or engage in any transactions arising as to our common stock, subject only to the voting rights available to stockholders generally.

In addition, our rights to participate in the assets of any of our subsidiaries upon any liquidation or reorganization of any subsidiary will be subject to the prior claims of that subsidiary's creditors (except to the extent we may ourselves be a creditor of that subsidiary), including that subsidiary's trade creditors and our creditors who have obtained or may obtain guarantees from the subsidiaries. As a result, our common stock will be subordinated to our and our subsidiaries' obligations and liabilities, which currently include borrowings and guarantees. See Item 7. "*Management Discussion and Analysis of Financial Condition and Results of Operations*" - "*Senior Secured Credit Facilities*," "*5.25% Senior Notes due 2027*" and "3.625*% Senior Notes due 2026*."

Our ability to pay any dividends on our common stock may be limited and, consequently, your ability to achieve a return on your investment will depend on appreciation in the price of our common stock.

We have not paid any dividends on our common stock since January 3, 1989 and we have no current plans to do so. Our current financing arrangements permit us to pay cash dividends on our common stock within limitations defined by the terms of our existing indebtedness, including our senior secured credit facility, 5.25% senior notes due 2027 and 3.625% senior notes due 2026 and any other indentures or other financing arrangements that we enter into in the future. For example, our senior secured credit facility restricts our ability to make payments of dividends in cash if certain coverage ratios are not met. Even if such coverage ratios are met in the future, any determination to pay cash dividends on our common stock will be at the discretion of our board of directors and will be based upon our financial condition, operating results, capital requirements, plans for expansion, business opportunities, restrictions imposed by any of our financing arrangements, provisions of applicable law and any other factors that our board of directors determines are relevant at that point in time.

The issuance of shares of preferred stock could adversely affect holders of common stock, which may negatively impact your investment.

Our board of directors is authorized to cause us to issue classes or series of preferred stock without any action on the part of our stockholders. The board of directors also has the power, without stockholder approval, to set the terms of any such classes or series of preferred shares that may be issued, including the designations, preferences, limitations and relative rights senior to the rights of our common stock with respect to dividends or upon the liquidation, dissolution or winding up of our business and other terms. If we issue preferred shares in the future that have a preference over the common stock with respect to the payment of dividends or upon liquidation, dissolution or winding up, or if we issue preferred shares with voting rights that dilute the voting power of the common stock, the rights of holders of the common stock or the market price of the common stock could be adversely affected. As of the date of this report, we have no outstanding shares of preferred stock but we have available for issuance 1,000,000 authorized but unissued shares of preferred stock.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

As of December 28, 2019, the Company's corporate headquarters is located at 5601 N MacArthur Boulevard, Irving, Texas, 75038.

As of December 28, 2019, the Company operates a global network of over 200 locations, including 144 production facilities, across five continents. All of the processing facilities are owned except for 10 leased facilities and the Company owns and leases a network of transfer stations. The following is a listing of a majority of the Company's operating plants as of December 28, 2019 by operating segment with a description of the plants principal process.

LOCATION	DESCRIPTION
Feed Ingredients Segment	
Albertville, Alabama, United States	Bakery Residuals
Bastrop, Texas, United States	Animal By-Products
Bellevue, Nebraska, United States	Animal By-Products
Berlin, Wisconsin, United States	Animal By-Products
Blue Earth, Minnesota, United States	Animal By-Products
Blue Island, Illinois, United States	Used Cooking Oil/Trap Processing
Boise, Idaho, United States	Animal By-Products
Bryan, Texas, United States	Bakery Residuals
Burgum, Netherlands	Animal By-Products
Butler, Kentucky, United States	Animal By-Products
Butler, Kentucky, United States	Bakery Residuals
Clinton, Iowa, United States	Animal By-Products
Coldwater, Michigan, United States	Animal By-Products
Collinsville, Oklahoma, United States	Animal By-Products
Dallas, Texas, United States	Animal By-Products
Denver, Colorado, United States	Animal By-Products
Des Moines, Iowa, United States	Animal By-Products
Doswell, Virginia, United States	Bakery Residuals
Dundas, Ontario, Canada	Animal By-Products
East Dublin, Georgia, United States	Animal By-Products
E. St. Louis, Illinois, United States	Animal By-Products
Ellenwood, Georgia, United States	Animal By-Products
Fresno, California, United States	Animal By-Products
Grapeland, Texas, United States	Animal By-Products
Hamilton, Michigan, United States	Animal By-Products
Henderson, Kentucky, United States	Fertilizer
Henderson, Kentucky, United States	Bakery Residuals
Hickson, Ontario, Canada	Animal By-Products
Honey Brook, Pennsylvania, United States	Bakery Residuals
Houston, Texas, United States	Animal By-Products
Jackson, Mississippi, United States	Animal By-Products
Kansas City, Kansas, United States	Animal By-Products
Kansas City, Kansas, United States	Protein Refining
Lexington, Nebraska, United States	Animal By-Products
Lingen, Germany	Blood
Loenen, Netherlands	Animal By-Products
Los Angeles, California, United States	Animal By-Products
Luohe, China	Blood
Maquoketa, Iowa, United States	Blood
Marshville, North Carolina, United States	Bakery Residuals
Maryborough, Australia	Blood
Maysville, KY	Protein Refining
Maysville, KY	Bakery Residuals
Mason City, Illinois, United States	Animal By-Products
Mering, Germany	Blood
Moorefield, Ontario, Canada	Animal By-Products
Muscatine, Iowa, United States	Bakery Residuals
Newark, New Jersey, United States	Animal By-Products
Newberry, Indiana, United States	Animal By-Products
North Baltimore, Ohio, United States	Bakery Residuals
Omaha, Nebraska, United States	Protein Refining

Omaha, Nebraska, United States	Animal By-Products
Osetnica, Poland	Animal By-Products
Paducah, Kentucky, United States	Wet Pet Food
Pocahontas, Arkansas, United States *	Animal By-Products
Ravenna, Nebraska, United States	Wet Pet Food
Russellville, Kentucky, United State	Animal By-Products
San Francisco, California, United States *	Animal By-Products
Sioux City, Iowa, United States	Animal By-Products
Smyrna, Georgia, United States	Trap Processing
Springdale, Arkansas, United States	Wet Pet Food
Son, Netherlands	Animal By-Products
Starke, Florida, United States	Animal By-Products
Suzhou, China	Blood
Tacoma, Washington, United States *	Animal By-Products
Tama, Iowa, United States	Animal By-Products
Tampa, Florida, United States	Animal By-Products
Truro, Novia Scotia, Canada	Used Cooking Oil
Turlock, California, United States	Animal By-Products
Turlock, California, United States	Fertilizer
Union City, Tennessee, United States	Animal By-Products
Usnice, Poland	Animal By-Products
Wahoo, Nebraska, United States	Animal By-Products
Watts, Oklahoma, United States	Bakery Residuals/Protein Refining
Wichita, Kansas, United States	Animal By-Products
Winesburg, Ohio, United States *	Animal By-Products
Winnipeg, Manitoba, Canada	Animal By-Products

Food Ingredients Segment

Almere, Netherlands	Casings
Amparo, Brazil	Collagen
Angouleme, France	Collagen
Da'an, China	Collagen
Dubuque, Iowa, United States	Collagen
Eindhoven, Netherlands	Fat
Elsholz, Germany	Fat
Erolzheim, Germany	Fat
Gent, Belgium	Collagen
Girona, Spain	Collagen
Harlingen, Netherlands	Fat
Ilse-Sur-La-Sorgue, France	Collagen
Kaiping, China	Collagen
Lubien, Poland	Fat
Peabody, Massachusetts, United States	Collagen
Porto, Portugal	Casings
Presidente Epitacio, Brazil	Collagen
Stoke-on Trent, United Kingdom	Bone
Versmold, Germany	Fat
Vuren, Netherlands	Bone
Wenzhou, China	Collagen

Fuel Ingredients Segment

Belm-Icker, Germany	Bioenergy
Butler, Kentucky, United States	Biodiesel
Denderleeuw, Belgium	Bioenergy
Jagel, Germany	Bioenergy
Rotenburg, Germany	Bioenergy
Saint-Catherine, Quebec Canada *	Biodiesel
Son, Netherlands	Bioenergy

* Leased

Rent expense for our leased properties was $13.0 million in the aggregate in fiscal 2019. We believe our current properties are suitable and adequate for their intended purpose.

ITEM 3. LEGAL PROCEEDINGS

The Company is a party to various lawsuits, claims and loss contingencies arising in the ordinary course of its business, including insured worker's compensation, auto, and general liability claims, assertions by certain regulatory and governmental agencies related to permitting requirements and/or air, wastewater and storm water discharges from the Company's processing facilities, litigation involving tort, contract, statutory, labor, employment, and other claims, and tax matters.

The Company’s workers compensation, auto and general liability policies contain significant deductibles or self-insured retentions. The Company estimates and accrues its expected ultimate claim costs related to accidents occurring during each fiscal year under these insurance policies and carries this accrual as a reserve until these claims are paid by the Company.

As a result of the matters discussed above, the Company has established loss reserves for insurance, environmental, litigation and tax contingencies. At December 28, 2019 and December 29, 2018, the reserves for insurance, environmental, litigation and tax contingencies reflected on the balance sheet in accrued expenses and other non-current liabilities were approximately $70.5 million and $66.6 million, respectively. The Company has insurance recovery receivables of approximately $26.2 million and $26.1 million as of December 28, 2019 and December 29, 2018, related to insurance contingencies. The Company’s management believes these reserves for contingencies are reasonable and sufficient based upon present governmental regulations and information currently available to management; however, there can be no assurance that final costs related to these contingencies will not exceed current estimates. The Company believes that the likelihood is remote that any additional liability from the lawsuits and claims that may not be covered by insurance would have a material effect on the Company's financial position, results of operations or cash flows.

Lower Passaic River Area. In December 2009, the Company, along with numerous other entities, received notice from the United States Environmental Protection Agency (“EPA”) that the Company (as alleged successor-in-interest to The Standard Tallow Corporation) is considered a potentially responsible party (a “PRP”) with respect to alleged contamination in the lower 17-mile area of the Passaic River which is part of the Diamond Alkali Superfund Site located in Newark, New Jersey. The Company’s designation as a PRP is based upon the operation of a former plant sites located in Newark and Kearny, New Jersey by The Standard Tallow Corporation, an entity that the Company acquired in 1996. In the letter, EPA requested that the Company join a group of other parties in funding a remedial investigation and feasibility study at the site. As of the date of this report, the Company has not agreed to participate in the funding group. In March 2016, the Company received another letter from EPA notifying the Company that it had issued a Record of Decision (the “ROD”) selecting a remedy for the lower 8.3 miles of the lower Passaic River area at an estimated cost of $1.38 billion. The EPA letter makes no demand on the Company and lays out a framework for remedial design/remedial action implementation in which the EPA will first seek funding from major PRPs. The letter indicates that the EPA has sent the letter to over 100 parties, which include large chemical and refining companies, manufacturing companies, foundries, plastic companies, pharmaceutical companies and food and consumer product companies. The EPA has already offered early cash out settlements to 20 of the other PRPs and has stated that other parties who did not discharge any of the eight contaminants of concern identified in the ROD (the “COCs”) may also be eligible for cash out settlements and conducted a settlement analysis using a third-party allocator. The Company participated in this allocation process as it asserts that it is not responsible for any liabilities of its former subsidiary The Standard Tallow Corporation, which was legally dissolved in 2000, and that, in any event, The Standard Tallow Corporation did not discharge any of the COCs. In November 2019, the Company received a cash out settlement offer from the EPA in the amount of $0.6 million ($0.3 million for each of the former plant sites in question) for liabilities relating to the lower 8.3 miles of the lower Passaic River area. The Company has accepted this settlement offer, which is now subject to the EPA’s administrative approval process, which includes publication and a public comment period. On September 30, 2016, Occidental Chemical Corporation (“OCC”) entered into an agreement with the EPA to perform the remedial design for the cleanup plan for the lower 8.3 miles of the Passaic River. On June 30, 2018, OCC filed a complaint in the United States District Court for the District of New Jersey against over 100 companies, including the Company, seeking cost recovery or contribution for costs under the Comprehensive Environmental Response, Compensation and Liability Act (“CERCLA”) relating to various investigations and cleanups OCC has conducted or is conducting in connection with the Passaic River. According to the complaint, OCC has incurred or is incurring costs which include the estimated cost to complete the remedial design for the cleanup plan for the lower 8.3 miles of the Passaic River. OCC is also seeking a declaratory judgment to hold the defendants liable for their proper shares of future response costs, including the remedial action for the lower 8.3 miles of the Passaic River. The Company, along with 40 of the other defendants, had previously received a release from OCC of its CERCLA contribution claim of $165 million associated with the costs to design the remedy for the lower 8.3 miles of the Passaic River. Furthermore, in the event the settlement with the EPA described above is consummated, it could preclude certain of the claims alleged by OCC against the Company. The Company's ultimate liability, if any, for investigatory costs, remedial costs and/or natural resource damages in connection with the lower Passaic River area cannot be determined at this time; however, as of the date of this report, the Company has found no definitive evidence that the former Standard Tallow Corporation plant sites contributed any of the COCs to the Passaic River and, therefore, there is nothing that leads the Company to believe that this matter will have a material effect on the Company's financial position, results of operations or cash flows.

The Company is engaged in other legal proceedings from time to time. The proceedings described above and such other proceedings can be complex and take many months, or even years, to reach resolution, with the final outcome being dependent upon a number of variables, some of which are not within the control of the Company. Therefore, although the Company will vigorously defend itself in each of the described actions, the ultimate resolution and potential financial impact on the Company is uncertain.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Market Information

The Company’s common stock is traded on the New York Stock Exchange (“NYSE”) under the symbol “DAR”.

Holders

The Company has been notified by its stock transfer agent that as of February 19, 2020, there were 141 holders of record of the common stock.

Dividend Policy

The Company has not paid any dividends on its common stock since January 3, 1989 and does not expect to pay cash dividends in 2020. The agreements underlying the Company's senior secured credit facilities and senior notes permit the Company to pay cash dividends on its common stock within limitations defined in such agreements. Any future determination to pay cash dividends on the Company’s common stock will be at the discretion of the Company’s board of directors and will be based upon the Company’s financial condition, operating results, capital requirements, plans for expansion, restrictions imposed by any existing or future financing arrangements, and any other factors that the board of directors determines are relevant.

Issuer Purchases of Equity Securities

On August 7, 2017, the Company's Board of Directors approved the extension for an additional two years of its previously announced share repurchase program and refreshed the amount of the program back up to its original amount of an aggregate of $100.0 million of the Company's Common Stock depending on market conditions. To that point, the Company had previously repurchased $10.9 million shares of its Common stock under the program. The repurchases may be made from time to time on the open market at prevailing market prices or in negotiated transactions off the market. On November 6, 2018, the Board approved an increase in the share repurchase program from $100.0 million to $200.0 million and extended the term of the program for an additional year to August 13, 2020. Repurchases may occur through August 13, 2020, unless extended or shortened by the Board of Directors. Since the inception of the share repurchase program, the Company has repurchased approximately $30.1 million of its common stock in open market purchases and, as of the date of this report, has $180.8 million remaining in its share repurchase program.

The following table is a summary of equity securities purchased by the Company during the fourth quarter of fiscal 2019.

ISSUER PURCHASES OF EQUITY SECURITIES

Period	Total Number of Shares Purchased (1)	Average Price Paid per Share (2)	Total Number of Shares Purchased as part of Publicly Announced Plans or Programs (4)	Maximum Number (or Approximate Dollar Value) of Shares that may yet be Purchased Under the Plan or Programs at End of Period.
October 2019:				
September 29, 2019 through October 26, 2019	407,076	18.47	407,076	$ 180,760,509
November 2019:				
October 27, 2019 through November 23, 2019	40,855 (3)	22.84	—	180,760,509
December 2019:				
November 24, 2019 through December 28, 2019	82,337 (3)	24.07	—	180,760,509
Total	530,268	21.07	407,076	$ 180,760,509

(1) All shares purchased during the fourth quarter were acquired by the Company pursuant to the announced share repurchase program (other than shares withheld for taxes on restricted stock and exercised options and the strike price on exercised options).

(2) The average price paid per share is calculated on a trade date basis and excludes commissions.

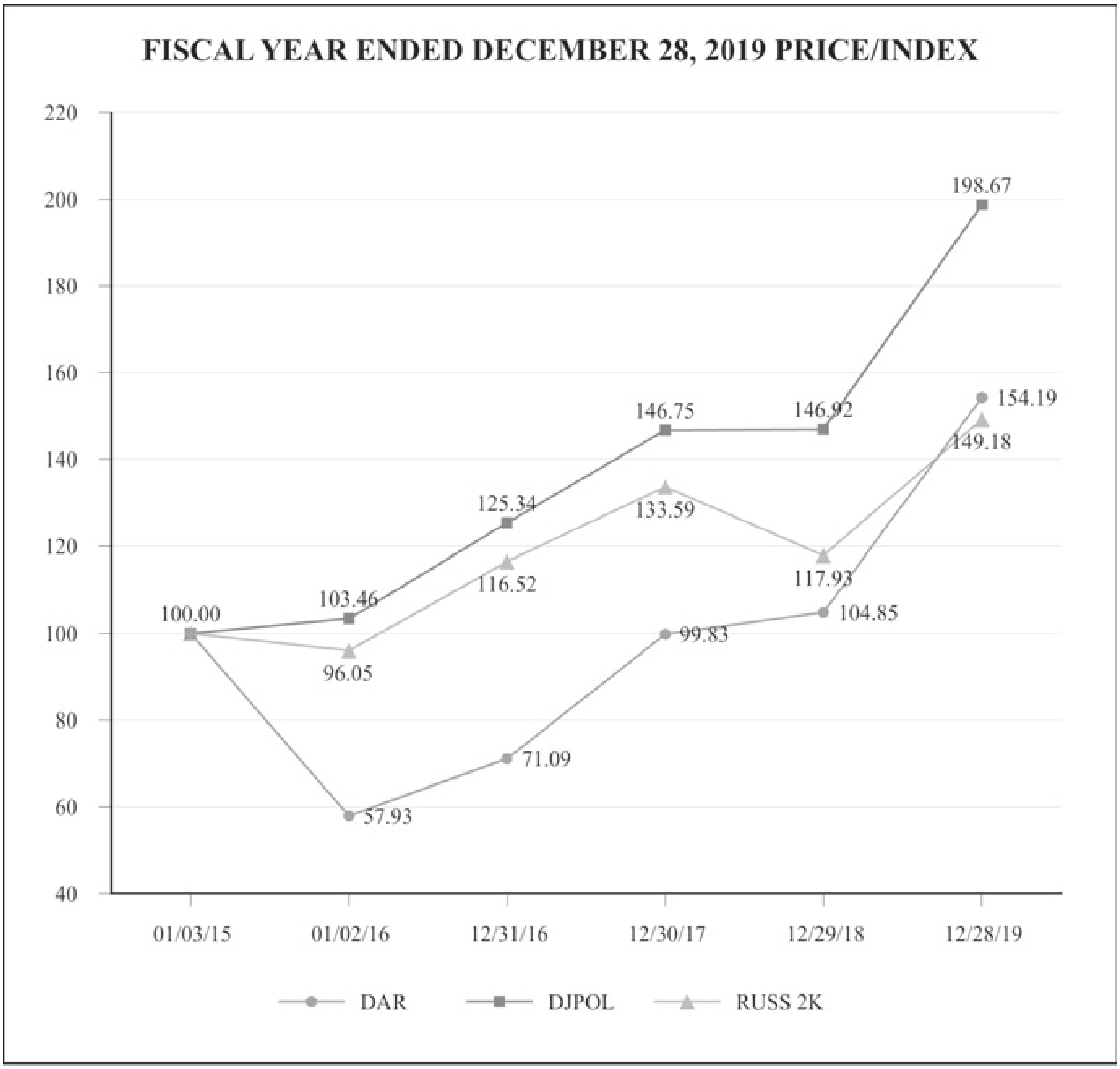
(3) Shares withheld for taxes on restricted stock and options.

(4) Represents purchases made during the quarter under the authorization from the Company's Board of Directors, as announced, to repurchase up to an aggregate of $200.0 million of the Company's common stock over the period ending August 13, 2020, unless extended or shortened by the Board of Directors.

Common Stock Performance Graph

Set forth below is a line graph comparing the change in the cumulative total stockholder return on the Company's common stock with the cumulative total return of the Russell 2000 Index and the Dow Jones US Waste and Disposal Service Index for the period from January 3, 2015 to December 28, 2019, assuming the investment of $100 on January 4, 2015 and the reinvestment of dividends. The Agri-Equities Index - Tier One is no longer shown as in prior years since it is no longer being produced.

The stock price performance shown on the following graph only reflects the change in the Company's stock price relative to the noted indices and is not necessarily indicative of future price performance.



EQUITY COMPENSATION PLANS

The information required by this Item with respect to Item 201(d) of Regulation S-K appears in Item 12 of this report.

ITEM 6. SELECTED FINANCIAL DATA

SELECTED HISTORICAL CONSOLIDATED FINANCIAL DATA

The following table presents selected consolidated historical financial data for the periods indicated. The selected historical consolidated financial data set forth below should be read in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the Consolidated Financial Statements of the Company for the three years ended December 28, 2019, December 29, 2018, and December 30, 2017, and the related notes thereto.

	Fiscal 2019 Fifty-two Weeks Ended December 28, 2019	Fiscal 2018 Fifty-two Weeks Ended December 29, 2018 (e)	Fiscal 2017 Fifty-two Weeks Ended December 30, 2017 (f)	Fiscal 2016 Fifty-two Weeks Ended December 31, 2016 (f)	Fiscal 2015 Fifty-two Weeks Ended January 2, 2016
	(dollars in thousands, except per share data)				
Statement of Operations Data:					
Net sales	$ 3,363,905	$ 3,387,726	$ 3,662,251	$ 3,391,928	$ 3,391,255
Cost of sales and operating expenses (f)	2,589,085	2,646,374	2,875,680	2,635,333	2,654,025
Loss (gain) on sale of assets	(20,582)	709	(237)	—	—
Selling, general and administrative expenses (b), (f)	358,523	309,264	343,502	311,552	316,383
Restructuring and impairment charges	—	14,965	—	—	—
Depreciation and amortization	325,510	321,192	302,100	289,908	269,904
Acquisition and integration costs	—	—	—	401	8,299
Equity in net income of Diamond Green Diesel (h)	364,452	159,779	28,239	69,912	71,895
Operating income	475,821	255,001	169,445	224,646	214,539
Interest expense (a)	78,674	86,429	88,926	94,187	105,530
Debt extinguishment costs	12,126	23,509	—	—	—
Foreign currency loss	1,311	6,431	6,898	1,854	4,911
Loss (gain) on disposal of subsidiaries	(2,967)	12,545	885	—	—
Other expense, net, (f)	6,671	7,562	8,801	6,533	6,839
Equity in net loss/(income) of other unconsolidated subsidiaries and unconsolidated subsidiaries (h)	(428)	550	(265)	(467)	(1,521)
Income from continuing operations before income taxes	380,434	117,975	64,200	122,539	98,780
Income tax (benefit)/expense	59,467	12,031	(69,154)	15,315	13,501
Net Income	$ 320,967	$ 105,944	$ 133,354	$ 107,224	$ 85,279
Net Income attributable to minority interests	(8,367)	(4,448)	(4,886)	(4,911)	(6,748)
Net Income attributable to Darling	**$ 312,600**	**$ 101,496**	**$ 128,468**	**$ 102,313**	**$ 78,531**
Basic earnings per common share	$ 1.90	$ 0.62	$ 0.78	$ 0.62	$ 0.48
Diluted earnings per common share	$ 1.86	$ 0.60	$ 0.77	$ 0.62	$ 0.48
Weighted average shares outstanding	164,633	164,789	164,752	164,600	165,031
Diluted weighted average shares outstanding	168,378	167,910	166,730	165,212	165,119
Other Financial Data:					
Adjusted EBITDA (c)	$ 436,879	$ 431,379	$ 443,306	$ 444,642	$ 412,548
Depreciation	251,880	246,002	224,125	212,217	186,595
Amortization	73,630	75,190	77,975	77,691	83,309
Capital expenditures (d)	359,498	321,896	274,168	243,523	229,848
Balance Sheet Data:					
Working capital (g)	$ 228,949	$ 357,444	$ 396,962	$ 441,451	$ 490,120
Total assets (g)	5,345,258	4,889,354	4,958,225	4,698,017	4,760,619
Current portion of long-term debt (g)	90,996	7,492	16,143	23,247	45,166
Total long-term debt less current portion (g)	1,558,429	1,666,940	1,698,050	1,727,696	1,885,851
Stockholders' equity attributable to Darling	2,565,819	2,273,048	2,244,933	1,972,994	1,870,709

(a) Included in interest expense for fiscal 2015 is the write-off of deferred loan costs of approximately $10.6 million.

(b) Included in selling, general and administrative expense for fiscal 2019 is a gain of approximately $4.4 million and for fiscal 2016 there is a gain of approximately $3.1 million from business interruption insurance proceeds.

(c) Adjusted EBITDA is presented here not as an alternative to net income, but rather as a measure of the Company's operating performance and is not intended to be a presentation in accordance with U.S. generally accepted accounting principles ("GAAP"). Adjusted EBITDA is calculated below and represents, for any relevant period, net income/(loss) plus depreciation and amortization, goodwill and long-lived asset impairment and restructuring charges, interest expense, (income)/loss from discontinued operations, net of tax, income tax provision, other income/(expense) and equity in net loss (gain) of unconsolidated subsidiaries. The Company believes adjusted EBITDA is a useful measure for investors because it is frequently used by securities analysts, investors and other interested parties in the evaluation of companies in the Company's industry. In addition, management believes that adjusted EBITDA is useful in evaluating the Company's operating performance compared to that of other companies in the food ingredients and agriculture industries because the calculation of adjusted EBITDA generally eliminates the effects of financing, income taxes and certain non-cash and other items that may vary for different companies for reasons unrelated to overall operating performance. As a result, the Company's management uses adjusted EBITDA as a measure to evaluate performance and for other discretionary purposes. However, adjusted EBITDA is not a recognized measurement under GAAP, should not be considered as an alternative to net income as a measure of operating results or to cash flow as a measure of liquidity, and is not intended to be a presentation in accordance with GAAP. Also, since adjusted EBITDA is not calculated identically by all companies, the presentation in this report may not be comparable to those disclosed by other companies. In addition to the foregoing, management also uses or will use adjusted EBITDA to measure compliance with certain financial covenants under the Company's senior secured credit facilities and senior unsecured notes that were outstanding at December 28, 2019. The amounts shown below for adjusted EBITDA differ from the amounts calculated under similarly titled definitions in the Company's Senior Secured Credit Facilities and Senior Unsecured Notes, as those definitions permit further adjustments to reflect certain other non-cash charges.

Reconciliation of Net Income to Adjusted EBITDA

(dollars in thousands)	December 28, 2019	December 29, 2018	December 30, 2017	December 31, 2016	January 2, 2016
Net income attributable to Darling	**$ 312,600**	**$ 101,496**	**$ 128,468**	**$ 102,313**	**$ 78,531**
Depreciation and amortization	325,510	321,192	302,100	289,908	269,904
Interest expense	78,674	86,429	88,926	94,187	105,530
Income tax (benefit)/expense	59,467	12,031	(69,154)	15,315	13,501
Restructuring and impairment charges	—	14,965	—	—	—
Other, net	7,982	13,993	15,699	8,387	11,750
Debt extinguishment costs	12,126	23,509	—	—	—
Loss (gain) on disposal of subsidiaries	(2,967)	12,545	885	—	—
Equity in net income of unconsolidated subsidiaries	(364,880)	(159,229)	(28,504)	(70,379)	(73,416)
Net income attributable to noncontrolling interests	8,367	4,448	4,886	4,911	6,748
Adjusted EBITDA	**$ 436,879**	**$ 431,379**	**$ 443,306**	**$ 444,642**	**$ 412,548**

(d) Fiscal 2018 excludes the capital assets acquired in the Kruger Commodities, Inc., Triple - T Foods - Arkansas, Inc., and Sonac Lubien, Poland acquisitions of approximately $31.6 million. Fiscal 2017, fiscal 2016 and fiscal 2015 excludes the capital assets acquired in immaterial acquisitions.

(e) Subsequent to the date of acquisition, fiscal 2018 includes 32 weeks of contribution from the acquisition of Kruger Commodities, Inc., 12 weeks from the acquisition of Triple-T Foods - Arkansas, Inc. and 8 weeks from the acquisition of Sonac Lubien.

(f) In fiscal 2017 and fiscal 2016, includes certain reclassifications from cost of sales of approximately $0.4 million and $0.2 million, respectively and from selling general and administrative costs of approximately $4.0 million and $2.5 million, respectively to other income/(expense), net to conform to current presentation for pension expense.

(g) Fiscal 2015 includes certain reclassifications for deferred loan costs from long-term assets of approximately $29.0 million to current and non-current liabilities as reduction of outstanding debt to conform with fiscal 2016 presentation of debt. The presentation impact was to reduce total assets by approximately $29.0 million, increase working capital by approximately $2.1 million, reduce current portion of long-term debt by approximately $2.1 million and reduce long-term debt less current portion by approximately $26.9 million.

(h) In 2019, the Company continued to evaluate operational developments and the impact of anticipated significant expansion of the DGD Joint Venture. This evaluation was impactful to the consideration of how the Company most appropriately reflects its share of equity income from the DGD Joint Venture. Based on the Company's analysis, it was determined that the DGD Joint Venture has evolved into an integral and integrated part of the Company's ongoing operations. The Company determined this justifies a more meaningful and transparent presentation of equity in net income of the DGD Joint Venture as a component of the Company's operating income. As a result, the Company has reclassified its equity in net income of the DGD Joint Venture to operating income for fiscal 2018, fiscal 2017, fiscal 2016 and fiscal 2015 to conform with current presentation.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following Management's Discussion and Analysis of Financial Condition and Results of Operations contains forward-looking statements that involve risks and uncertainties. The Company's actual results could differ materially from those anticipated in these forward-looking statements as a result of certain factors, including those set forth below under the heading "Forward Looking Statements" and in Item 1A of this report under the heading "Risk Factors."

Fiscal Year 2019 Overview

The Company is a global developer and producer of sustainable natural ingredients from edible and inedible bio-nutrients, creating a wide range of ingredients and customized specialty solutions for customers in the pharmaceutical, food, pet food, feed, industrial, fuel, bioenergy and fertilizer industries. With operations on five continents, the Company collects and transforms all aspects of animal by-product streams into useable and specialty ingredients, such as collagen, edible fats, feed-grade fats, animal proteins and meals, plasma, pet food ingredients, organic fertilizers, yellow grease, fuel feedstocks, green energy, natural casings and hides. The Company also recovers and converts recycled oils (used cooking oil and animal fats) into valuable feed and fuel ingredients, and collects and processes residual bakery products into feed ingredients. In addition, the Company provides environmental services, such as grease trap collection and disposal services to food service establishments. The Company sells its products domestically and internationally and operates within three industry segments: Feed Ingredients, Food Ingredients and Fuel Ingredients.

The Feed Ingredients operating segment includes the Company's global activities related to (i) the collection and processing of beef, poultry and pork animal by-products in North America and Europe into non-food grade oils and protein meals, (ii) the collection and processing of bakery residuals in North America into Cookie Meal®, which is predominantly used in poultry and swine rations, (iii) the collection and processing of used cooking oil in North America into non-food grade fats, (iv) the collection and processing of porcine and bovine blood in China, Europe, North America and Australia into blood plasma powder and hemoglobin, (v) the processing of selected portions of slaughtered animals into a variety of meat products for use in pet food in Europe and North America, (vi) the processing of cattle hides and hog skins in North America, (vii) the production of organic fertilizers using protein produced from the Company’s animal by-products processing activities in North America and Europe, and (viii) the rearing and processing of black soldier fly larvae into specialty proteins for use in animal feed and pet food in North America; and (ix) the provision of grease trap services to food service establishments in North America. Non-food grade oils and fats produced and marketed by the Company are principally sold to third parties to be used as ingredients in animal feed and pet food, as an ingredient for the production of biodiesel and renewable diesel, or to the oleo-chemical industry to be used as an ingredient in a wide variety of industrial applications. Protein meals, blood plasma powder and hemoglobin produced and marketed by the Company are sold to third parties to be used as ingredients in animal feed, pet food and aquaculture.

The Food Ingredients operating segment includes the Company's global activities related to (i) the purchase and processing of beef and pork bone chips, beef hides, pig skins, and fish skins into collagen in Europe, China, South America and North America, (ii) the collection and processing of porcine and bovine intestines into natural casings in Europe, China and North America, (iii) the extraction and processing of porcine mucosa into crude heparin in Europe, (iv) the collection and refining of animal fat into food grade fat in Europe, and (v) the processing of bones to bone chips for the collagen industry and bone ash in Europe. Collagens produced and marketed by the Company are sold to third parties to be used as ingredients in the pharmaceutical, nutraceutical, food, pet food and technical (e.g., photographic) industries. Natural casings produced and marketed by the Company are sold to third parties to be used as an ingredient in the production of sausages and other similar food products.

The Fuel Ingredients operating segment includes the Company's global activities related to (i) the Company’s share of the results of its equity investment in Diamond Green Diesel Holdings LLC, a joint venture with Valero Energy Corporation ("Valero") to convert animal fats, recycled greases, used cooking oil, inedible corn oil, soybean oil, or other feedstocks that become economically and commercially viable into renewable diesel (the "DGD Joint Venture") as described in Note 2 to the Company's Consolidated Financial Statements for the period ended December 28, 2019 included herein, (ii) the conversion of animal fats and recycled greases into biodiesel in North America, (iii) the conversion of organic sludge and food waste into biogas in Europe, (iv) the collection and conversion of fallen stock and certain animal by-products pursuant to applicable E.U. regulations into low-grade energy sources to be used in industrial applications, and (v) the processing of manure into natural bio-phosphate in Europe.

Corporate Activities principally includes unallocated corporate overhead expenses, acquisition-related expenses, interest expense net of interest income, and other non-operating income and expenses.

Operating Performance Indicators

The Company monitors the performance of its business segments using key financial metrics such as results of operations, non-GAAP measurements (Adjusted EBITDA), segment operating income, raw material processed, gross margin percentage, foreign currency translation, and corporate activities. The Company's operating results can vary significantly due to changes in factors such as the fluctuation in energy prices, weather conditions, crop harvests, government policies and programs, changes in global demand, changes in standards of living, protein consumption, and global production of competing ingredients. Due to these unpredictable factors that are beyond the control of the Company, forward-looking financial or operational estimates are not provided. The Company is exposed to certain risks associated with a business that is influenced by agricultural-based commodities. These risks are further described in Item 1A of this report under the heading "Risk Factors."

The Company's Feed Ingredients segment animal by-products, bakery residuals, used cooking oil recovery, and blood operations are each influenced by prices for agricultural-based alternative ingredients such as corn oil, soybean oil, soybean meal, and palm oil. In these operations, the costs of the Company's raw materials change with, or in certain cases are indexed to, the selling price or the anticipated selling price of the finished goods produced from the acquired raw materials and/or in some cases, the price spread between various types of finished products. The Company believes that this methodology of procuring raw materials generally establishes a relatively stable gross margin upon the acquisition of the raw material. Although the costs of raw materials for the Feed Ingredients segment are generally based upon actual or anticipated finished goods selling prices, rapid and material changes in finished goods prices, including competing agricultural-based alternative ingredients, generally have an immediate and often times, material impact on the Company's gross margin and profitability resulting from the brief lapse of time between the procurement of the raw materials and the sale of the finished goods. In addition, the volume of raw material volume acquired, which has a direct impact on the amount of finished goods produced, can also have a material effect on the gross margin reported, as the Company has a substantial amount of fixed operating costs.

The Company's Food Ingredients segment collagen and natural casings products are influenced by other competing ingredients including plant-based and synthetic hydrocolloids and artificial casings. In the collagen operation, the cost of the Company's animal-based raw material moves in relationship to the selling price of the finished goods. The processing time for the Food Ingredients segment collagen and casings is generally 30 to 60 days, which is substantially longer than the Company's Feed Ingredients segment animal by-products operations. Consequently, the Company's gross margin and profitability in this segment can be influenced by the movement of finished goods prices from the time the raw materials were procured until the finished goods are sold.

The Company's Fuel Ingredients segment converts fats into renewable diesel, organic sludge and food waste into biogas, and fallen stock into low-grade energy sources. The Company's gross margin and profitability in this segment are impacted by world energy prices for oil, electricity, natural gas and governmental subsidies.

The reporting currency for the Company's financial statements is the U.S. dollar. The Company operates in over 15 countries and therefore, certain of the Company's assets, liabilities, revenues and expenses are denominated in functional currencies other than the U.S. dollar, primarily in the Euro, Brazilian real, Chinese renminbi, Canadian dollar, Japanese yen and Polish zloty. To prepare the Company's consolidated financial statements, assets, liabilities, revenues, and expenses must be translated into U.S. dollars at the applicable exchange rate. As a result, increases or decreases in the value of the U.S. dollar against these other currencies will affect the amount of these items recorded in the Company's consolidated financial statements, even if their value has not changed in the functional currency. This could have a significant impact on the Company's results, if such increase or decrease in the value of the U.S. dollar relative to these other currencies is substantial.

In 2019, the Company continued to evaluate operational developments and the impact of anticipated significant expansion of the DGD Joint Venture. This evaluation was impactful to the consideration of how the Company most appropriately reflects its share of equity income from the DGD Joint Venture. Based on the Company's analysis, it was determined that the DGD Joint Venture has evolved into an integral and integrated part of the Company's ongoing operations. The Company determined this justifies a more meaningful and transparent presentation of equity in net income of the DGD Joint Venture as a component of the Company's operating income. As a result, the Company has reclassified its equity in net income of the DGD Joint Venture to operating income for all periods presented. Prior to the third quarter ended September 28, 2019, the equity in Diamond Green Diesel was presented below the operating income line in the Company's published results. Commencing with the third quarter of 2019, the Company is including its equity in earnings of Diamond Green Diesel in operating income for all periods presented.

Results of Operations

Fiscal Year Ended December 28, 2019 Compared to Fiscal Year Ended December 29, 2018

Operating Performance Metrics

Other operating performance metrics indicators which management routinely monitors as an indicator of operating performance include:

- Finished product commodity prices
- Segment results
- Foreign currency exchange
- Corporate activities
- Non-U.S. GAAP measures

These indicators and their importance are discussed below.

Finished Product Commodity Prices

Prices for finished product commodities that the Company produces in the Feed Ingredients segment are reported each business day on the Jacobsen Index (the "Jacobsen"), an established North American trading exchange price publisher. The Jacobsen reports industry sales from the prior day's activity by product. Included on the Jacobsen are reported prices for finished products such as MBM, PM and feather meal ("FM"), hides, BFT and YG and corn, which is a substitute commodity for the Company's BBP as well as a range of other branded and value-added products, which are products of the Company's Feed Ingredients segment. In the U.S. the Company regularly monitors the Jacobsen for MBM, PM, FM, BFT, YG and corn because it provides a daily indication of the Company's U.S. revenue performance against business plan benchmarks. In Europe, the Company regularly monitors Thomson Reuters ("Reuters") to track the competing commodities palm oil and soy meal.

Although the Jacobsen and Reuters provide useful metrics of performance, the Company's finished products are commodities that compete with other commodities such as corn, soybean oil, palm oil complex, soybean meal and heating oil on nutritional and functional values. Therefore, actual pricing for the Company's finished products, as well as competing products, can be quite volatile. In addition, neither the Jacobsen nor Reuters provides forward or future period pricing for the Company's commodities. The Jacobsen and Reuters prices quoted below are for delivery of the finished product at a specified location. Although the Company's prices generally move in concert with reported Jacobsen and Reuters prices, the Company's actual sales prices for its finished products may vary significantly from the Jacobsen and Reuters because of production and delivery timing differences and because the Company's finished products are delivered to multiple locations in different geographic regions which utilize alternative price indexes. In addition, certain of the Company's premium branded finished products may sell at prices that may be higher than the closest product on the related Jacobsen or Reuters index. During fiscal year 2019, the Company's actual sales prices by product trended with the disclosed Jacobsen and Reuters prices.

Average Jacobsen and Reuters prices (at the specified delivery point) for fiscal year 2019, compared to average Jacobsen and Reuters prices for fiscal year 2018 are:

	Avg. Price Fiscal Year 2019	Avg. Price Fiscal Year 2018	Increase/ (Decrease)	% Increase/ (Decrease)
Jacobsen:				
MBM (Illinois)	$ 230.85/ton	$ 266.75/ton	$ (35.90)/ton	(13.5)%
Feed Grade PM (Mid-South)	$ 241.37/ton	$ 267.76/ton	$ (26.39)/ton	(9.9)%
Pet Food PM (Mid-South)	$ 522.39/ton	$ 653.24/ton	$ (130.85)/ton	(20.0)%
FM (Mid-South)	$ 352.87/ton	$ 452.31/ton	$ (99.44)/ton	(22.0)%
BFT (Chicago)	$ 28.08/cwt	$ 26.34/cwt	$ 1.74/cwt	6.6 %
YG (Illinois)	$ 22.01/cwt	$ 20.60/cwt	$ 1.41/cwt	6.8 %
Corn (Illinois)	$ 3.95/bushel	$ 3.66/bushel	$ 0.29/bushel	7.9 %
Reuters:				
Palm Oil (CIF Rotterdam)	$ 568.00/ton	$ 597.00/ton	$ (29.00)/ton	(4.9)%
Soy meal (CIF Rotterdam)	$ 347.00/ton	$ 405.00/ton	$ (58.00)/ton	(14.3)%

The following table shows the average Jacobsen and Reuters prices for the fourth quarter of fiscal year 2019, compared to the average Jacobsen and Reuters prices for the third quarter of fiscal year 2019.

	Avg. Price 4th Quarter 2019	Avg. Price 3rd Quarter 2019	Increase/ (Decrease)	% Increase/ (Decrease)
Jacobsen:				
MBM (Illinois)	$ 230.01/ton	$ 216.29/ton	$ 13.72/ton	6.3 %
Feed Grade PM (Mid-South)	$ 223.46/ton	$ 234.60/ton	$ (11.14)/ton	(4.7)%
Pet Food PM (Mid-South)	$ 408.75/ton	$ 411.77/ton	$ (3.02)/ton	(0.7)%
FM (Mid-South)	$ 283.81/ton	$ 333.43/ton	$ (49.62)/ton	(14.9)%
BFT (Chicago)	$ 25.62/cwt	$ 30.50/cwt	$ (4.88)/cwt	(16.0)%
YG (Illinois)	$ 20.39/cwt	$ 24.53/cwt	$ (4.14)/cwt	(16.9)%
Corn (Illinois)	$ 3.98/bushel	$ 4.16/bushel	$ (0.18)/bushel	(4.3)%
Reuters:				
Palm Oil (CIF Rotterdam)	$ 675.00/ton	$ 533.00/ton	$ 142.00/ton	26.6 %
Soy meal (CIF Rotterdam)	$ 347.00/ton	$ 339.00/ton	$ 8.00/ton	2.4 %

Segment Results

Segment operating income for the fiscal year ended December 28, 2019 was $475.8 million, which reflects an increase of $220.8 million or 86.6% as compared to the fiscal year ended December 29, 2018.

	Feed Ingredients	Food Ingredients	Fuel Ingredients	Corporate	Total
Fiscal Year Ended December 28, 2019					
Net Sales	$1,970,561	$ 1,119,085	$ 274,259	$ —	$3,363,905
Cost of sales and operating expenses	1,519,596	864,618	204,871	—	2,589,085
Gross Margin	450,965	254,467	69,388	—	774,820
Gross Margin %	22.9%	22.7%	25.3%	—%	23.0%
Loss/ (gain) on sale of assets	(7,720)	(13,175)	313	—	(20,582)
Selling, general and administrative expense	200,487	97,363	2,762	57,911	358,523
Depreciation and amortization	203,456	79,671	31,946	10,437	325,510
Equity in net income of Diamond Green Diesel	—	—	364,452	—	364,452
Segment operating income/ (loss)	54,742	90,608	398,819	(68,348)	475,821
Equity in net income of unconsolidated subsidiaries	428	—	—	—	428
Segment income/(loss)	55,170	90,608	398,819	(68,348)	476,249

	Feed Ingredients	Food Ingredients	Fuel Ingredients	Corporate	Total
Fiscal Year Ended December 29, 2018					
Net Sales	$1,952,555	$ 1,139,126	$ 296,045	$ —	$3,387,726
Cost of sales and operating expenses	1,497,973	918,141	230,260	—	2,646,374
Gross Margin	454,582	220,985	65,785	—	741,352
Gross Margin %	23.3%	19.4%	22.2%	—%	21.9%
Loss/ (gain) on sale of assets	725	(282)	266	—	709
Selling, general and administrative expense	176,722	91,546	(4,770)	45,766	309,264
Restructuring and impairment charges	—	14,965	—	—	14,965
Depreciation and amortization	194,292	80,988	34,981	10,931	321,192
Equity in net income of Diamond Green Diesel	—	—	159,779	—	159,779
Segment operating income/(loss)	82,843	33,768	195,087	(56,697)	255,001
Equity in net loss of unconsolidated subsidiaries	(550)	—	—	—	(550)
Segment income/(loss)	82,293	33,768	195,087	(56,697)	254,451

Feed Ingredients Segment

Raw material volume. In fiscal year 2019, the raw material processed by the Company's Feed Ingredients segment totaled 8.74 million metric tons. Compared to fiscal year 2018, overall raw material volume processed in the Feed Ingredients segment increased approximately 1.7%.

Sales. During the year ended December 28, 2019, net sales for the Feed Ingredients segment were $1,970.6 million as compared to $1,952.6 million for the year ended December 29, 2018, an increase of approximately $18.0 million. Net sales for fats were approximately $584.3 million and $564.7 million for the years ended December 28, 2019 and December 29, 2018, respectively. Protein net sales were approximately $791.3 million and $842.9 million for the years ended December 28, 2019 and December 29, 2018, respectively. Other rendering net sales, which include hides, pet food, and service charges, were approximately $167.9 million and $129.3 million for the years ended December 28, 2019 and December 29, 2018, respectively. Total rendering net sales were approximately $1,543.5 million and $1,536.9 million for the years ended December 28, 2019 and December 29, 2018, respectively. Used cooking oil net sales were approximately $185.7 million and $166.7 million for the years ended December 28, 2019 and December 29, 2018, respectively. Bakery net sales were approximately $191.6 million and $180.2 million for the years ended December 28, 2019 and December 29, 2018, respectively, and other net sales, which includes trap services, were approximately $49.8 million and $68.8 million for the years ended December 28, 2019 and December 29, 2018, respectively.

The increase in net sales for the Feed Ingredients segment was primarily due to the following (in millions of dollars):

	Fats	Proteins	Other Rendering	Total Rendering	Used Cooking Oil	Bakery	Other	Total
Net sales year ended December 29, 2018	$ 564.7	$ 842.9	$ 129.3	$ 1,536.9	$ 166.7	$ 180.2	$ 68.8	$ 1,952.6
Increase/(decrease) in sales volumes	(10.0)	23.3	—	13.3	18.3	(1.0)	—	30.6
Increase/(decrease) in finished product prices	35.9	(57.4)	—	(21.5)	1.0	12.4	—	(8.1)
Increase/(decrease) due to currency exchange rates	(6.3)	(17.5)	(0.6)	(24.4)	(0.3)	—	(0.1)	(24.8)
Other change (1)	—	—	39.2	39.2	—	—	(18.9)	20.3
Total change	19.6	(51.6)	38.6	6.6	19.0	11.4	(19.0)	18.0
Net sales year ended December 28, 2019	$ 584.3	$ 791.3	$ 167.9	$ 1,543.5	$ 185.7	$ 191.6	$ 49.8	$ 1,970.6

(1) The decrease in other net sales is primarily a result of the sale of the Company's industrial residuals business in May 2018.

Margins. In the Feed Ingredients segment for fiscal year 2019, the gross margin percentage was 22.9% as compared to 23.3% for fiscal year 2018. The decrease in fiscal year 2019 was primarily due to lower protein finished product prices.

Segment operating income. Feed Ingredients' operating income for fiscal year 2019 was $54.7 million, a decrease of $28.1 million as compared to fiscal year 2018. This decrease was primarily due to a decrease in protein finished product sales prices, lower spreads in poultry pet grade products, higher compensation and depreciation and amortization costs from the addition of several new facilities in the U.S.

Food Ingredients Segment

Raw material volume. In fiscal year 2019, the raw material processed by the Company's Food Ingredients segment totaled 1.08 million metric tons. Compared to fiscal year 2018, overall raw material volume processed in the Food Ingredients segment decreased approximately (3.4)%. The decline was primarily due to certain food grade raw materials being diverted directly to the Chinese food markets as a result of ASF.

Sales. Overall sales decreased in the Food Ingredients segment primarily due to lower food grade bone and fat raw material volumes and therefore lower sales volumes, lower casings sales prices and strengthening of the U.S. dollar in fiscal year 2019 as compared to fiscal year 2018. These factors were somewhat offset by higher hydrolyzed collagen sales volumes and values.

Margins. In the Food Ingredients segment for fiscal year 2019, the gross margin percentage was 22.7% as compared to 19.4% for fiscal year 2018. The increase is primarily due to improved margins from the growth of the collagen business and the closure of the Argentina collagen plant which more than offset lower casing and edible fat margins.

Segment operating income. Food Ingredients' operating income was $90.6 million for fiscal year 2019, an increase of $56.8 million or 168.0% as compared to fiscal year 2018. The increase is primarily due to improved results in the collagen markets, a gain on sale of assets in China and no restructuring and impairment charges in the current year as compared to fiscal year 2018 when the Company closed its Argentina collagen plant.

Fuel Ingredients Segment

Raw material volume. In fiscal year 2019, the raw material processed by the Company's Fuel Ingredients segment totaled 1.26 million metric tons. Compared to fiscal year 2018, overall raw material volume processed in the Fuel Ingredients segment increased approximately 7.2%.

Sales. Overall sales decreased in the Fuel Ingredients segment primarily due the European business sales that translated to less U.S. dollar sales as a result of the strengthening U.S. dollar as well as lower diesel and RIN values in North America.

Margins. In the Fuel Ingredients segment (exclusive of the equity contribution from the DGD Joint Venture) for fiscal year 2019, the gross margin percentage was 25.3% as compared to 22.2% for fiscal year 2018. The increase is primarily related to the fiscal year 2018 and fiscal year 2019 blenders tax credits recorded in the fourth quarter of 2019, as compared to 2017 blenders tax credits recorded in the first quarter of fiscal year 2018.

Segment operating income.The Company's Fuel Ingredients segment operating income (inclusive of the equity contribution from DGD Joint Venture) for fiscal year 2019 was $398.8 million, an increase of $203.7 million or 104.4% as compared to fiscal year 2018. The increase in earnings was primarily due to the reinstated fiscal year 2018 and fiscal year 2019 blenders tax credits recorded in the fourth quarter of fiscal 2019, as compared to 2017 reinstated blenders tax credits booked in the first quarter of fiscal year 2018.

Foreign Currency

During fiscal year 2019, the Euro and Canadian dollar weakened against the U.S. dollar as compared to fiscal year 2018. Using actual results for fiscal year 2019 and the prior year's average foreign currency rates for fiscal year 2018 would result in an increase in operating income of approximately $16.9 million. The average rates assumption used in this calculation was the actual fiscal average rate for fiscal year 2019 of €1.00:USD$1.12 and CAD$1.00:USD$0.75 as compared to the average rate for fiscal year 2018 of €1.00:USD$1.18 and CAD$1.00:USD$0.77, respectively.

Corporate Activities

Selling, General and Administrative Expenses. Selling, general and administrative expenses were $57.9 million during fiscal year 2019, a $12.1 million increase from $45.8 million during fiscal year 2018. The increase was primarily due to an increase in corporate related compensation benefits and other corporate expenses.

Depreciation and Amortization. Depreciation and amortization charges decreased $0.5 million to $10.4 million during fiscal year 2019 as compared to $10.9 million during fiscal year 2018. The decrease was due to certain of the Company's corporate assets becoming fully depreciated as compared to fiscal year 2018.

Interest Expense. Interest expense was $78.7 million for fiscal year 2019, compared to $86.4 million for fiscal year 2018, a decrease of $7.7 million. The decrease was primarily due to an interest rate decrease on the Company's euro and U.S. based senior notes, a reduction in deferred loan cost amortization and a reduction in term loan A and term loan B interest due to lower interest rates and lower debt outstanding as compared to fiscal year 2018.

Debt Extinguishment costs. Debt extinguishment costs were $12.1 million for fiscal year 2019, compared to $23.5 million for fiscal year 2018. The decrease was due to lower tender and redemption premiums and write-off of deferred loan costs on the 5.375% Senior Notes as compared to the 4.75% Senior Notes extinguished in fiscal year 2018.

Foreign Currency Losses. Foreign currency losses were $1.3 million during fiscal year 2019, as compared to a loss of approximately $6.4 million for fiscal year 2018. The decrease is due primarily to lower losses on the revaluation of non-functional currency liabilities as compared to the same period in fiscal 2018.

Gain (loss) on Disposal of Subsidiaries. Gain (loss) on disposal of subsidiaries represents a gain incurred in fiscal year 2019 on the sale of the Company's trap business in Canada and a gain on the sale of a foreign consolidated joint venture in Europe. The loss on sale of subsidiaries in fiscal year 2018 represents the loss recorded on the sale of a domestic subsidiary that more than offset a gain recorded on the liquidation of a majority owned foreign joint venture.

Other Income/Expense. Other expense was $6.7 million for fiscal year 2019, compared to $7.6 million in fiscal year 2018. The decrease in other expense was primarily due to an increase in insurance proceeds on fire and casualty losses that more than offset an increase in the non-service cost component of pension expense and a reduction of interest income.

Equity in Net Income in Investment of Other Unconsolidated Subsidiaries. This primarily represents the Company's pro rata share of the net income from its foreign unconsolidated subsidiaries other than the DGD Joint Venture that more than offset net losses from a domestic unconsolidated subsidiary.

Income Taxes. The Company recorded income tax expense of $59.5 million for fiscal year 2019, compared to $12.0 million of income tax expense recorded in fiscal year 2018, an increase of $47.5 million, which was primarily due to an increase in income from operations before income taxes. The effective tax rate for fiscal year 2019 and fiscal year 2018 was 15.6% and 10.2%, respectively. The effective tax rate for fiscal year 2019 differs from the statutory rate of 21% due primarily to the retroactive reinstatement of the biofuel tax incentive for 2018 and 2019 during 2019 and the relative mix of earnings among jurisdictions with different tax rates. Excluding the impact of the 2018 and 2019 biofuel tax incentive and tax law changes, the effective tax rate for fiscal year 2019 is 27.4%. The effective tax rate for fiscal year 2018 differs from the statutory rate of 21% due primarily to the retroactive reinstatement of the biofuel tax incentive for 2017 during 2018, tax law changes in the Netherlands, and changes in valuation allowances primarily related to deferred tax assets for tax losses that are not expected to be utilized in future years. Excluding the impact of the 2017 biofuel tax incentive and tax law changes, the effective tax rate for fiscal year 2018 is 34.4%.

Non-U.S. GAAP Measures

Adjusted EBITDA is not a recognized accounting measurement under GAAP; it should not be considered as an alternative to net income, as a measure of operating results, or as an alternative to cash flow as a measure of liquidity. It is presented here not as an alternative to net income, but rather as a measure of the Company's operating performance. Since EBITDA (generally, net income plus interest expenses, taxes, depreciation and amortization) is not calculated identically by all companies, the presentation in this report may not be comparable to EBITDA or adjusted EBITDA presentations disclosed by other companies. Adjusted EBITDA is calculated below and represents, for any relevant period, net income/(loss) plus depreciation and amortization, goodwill and long-lived asset impairment, interest expense, (income)/loss from discontinued operations, net of tax, income tax provision, other income/(expense) and equity in net (income)/loss of unconsolidated subsidiaries. Management believes that Adjusted EBITDA is useful in evaluating the Company's operating performance compared to that of other companies in its industry because the calculation of Adjusted EBITDA generally eliminates the effects of financing, income taxes and certain non-cash and other items that may vary for different companies for reasons unrelated to overall operating performance.

As a result, the Company's management uses Adjusted EBITDA as a measure to evaluate performance and for other discretionary purposes. In addition to the foregoing, management also uses or will use Adjusted EBITDA to measure compliance with certain financial covenants under the Company's Senior Secured Credit Facilities, 5.25% Notes and 3.625% Notes that were outstanding at December 28, 2019. However, the amounts shown below for Adjusted EBITDA differ from the amounts calculated under similarly titled definitions in the Company's Senior Secured Credit Facilities, 5.25% Notes and 3.625% Notes, as those definitions permit further adjustments to reflect certain other non-recurring costs, non-cash charges and cash dividends from the DGD Joint Venture. Additionally, the Company evaluates the impact of foreign currency exchange on operating cash flow, which is defined as segment operating income (loss) plus depreciation and amortization.

Reconciliation of Net Income to (Non-GAAP) Adjusted EBITDA and (Non-GAAP) Pro Forma Adjusted EBITDA
Fiscal Year 2019 As Compared to Fiscal Year 2018

(dollars in thousands)	Fiscal Year Ended December 28, 2019		Fiscal Year Ended December 29, 2018	
Net income attributable to Darling	$	312,600	$	101,496
Depreciation and amortization		325,510		321,192
Interest expense		78,674		86,429
Income tax expense		59,467		12,031
Restructuring and impairment charges		—		14,965
Foreign currency loss		1,311		6,431
Other expense, net		6,671		7,562
Debt extinguishment costs		12,126		23,509
Loss/(gain) on disposal of subsidiaries		(2,967)		12,545
Equity in net income of Diamond Green Diesel		(364,452)		(159,779)
Equity in net loss/(income) of other unconsolidated subsidiaries		(428)		550
Net (loss)/income attributable to noncontrolling interests		8,367		4,448
Adjusted EBITDA (Non-GAAP)	$	436,879	$	431,379
Foreign currency exchange impact (1)		16,898		—
Pro forma Adjusted EBITDA to Foreign Currency (Non-GAAP)	$	453,777	$	431,379
DGD Joint Venture Adjusted EBITDA (Darling's Share)	$	389,416	$	174,013
Darling plus Darling's share of DGD Joint Venture Adjusted EBITDA	$	826,295	$	605,392

(1) The average rate assumption used in this calculation was the actual fiscal average rate for the fiscal year ended December 28, 2019 of €1.00:USD$1.12 and CAD$1.00:USD$0.75 as compared to the average rate for the fiscal year ended December 29, 2018 of €1.00:USD$1.18 and CAD$1.00:USD$0.77, respectively.

For the fiscal year ended December 28, 2019, the Company generated Adjusted EBITDA (Non-GAAP) of $436.9 million, as compared to $431.4 million for the year ended December 29, 2018. The increase is attributable to higher margin collagen in the Feed Ingredients segment.

On a Pro forma Adjusted EBITDA to Foreign Currency (Non-GAAP) basis, the Company would have generated $453.8 million for the fiscal year ended December 28, 2019, as compared to $431.4 million for the year ended December 29, 2018.

DGD Joint Venture Adjusted EBITDA (Darling's Share) is not reflected in the Adjusted EBITDA, the Pro forma Adjusted EBITDA, or the Pro forma Adjusted EBITDA to Foreign Currency (Non-GAAP). See Note 2 to Notes to Consolidated Financial Statements included herein for financial information regarding the DGD Joint Venture.

Results of Operations

Fiscal Year Ended December 29, 2018 Compared to Fiscal Year Ended December 30, 2017

Operating Performance Metrics

Operating performance metrics indicators which management routinely monitors as an indicator of operating performance include:

- Finished product commodity prices
- Segment results
- Foreign currency exchange
- Corporate activities
- Non-U.S. GAAP measures

These indicators and their importance are discussed below.

Finished Product Commodity Prices

Average Jacobsen and Reuters prices (at the specified delivery point) for fiscal year 2018, compared to average Jacobsen and Reuters prices for fiscal year 2017 are:

	Avg. Price Fiscal Year 2018	Avg. Price Fiscal Year 2017	Increase/ (Decrease)	% Increase/ (Decrease)
Jacobsen:				
MBM (Illinois)	$ 266.75/ton	$ 259.54/ton	$ 7.21/ton	2.8 %
Feed Grade PM (Mid-South)	$ 267.76/ton	$ 277.42/ton	$ (9.66)/ton	(3.5)%
Pet Food PM (Mid-South)	$ 653.24/ton	$ 623.89/ton	$ 29.35/ton	4.7 %
FM (Mid-South)	$ 452.31/ton	$ 395.84/ton	$ 56.47/ton	14.3 %
BFT (Chicago)	$ 26.34/cwt	$ 31.93/cwt	$ (5.59)/cwt	(17.5)%
YG (Illinois)	$ 20.60/cwt	$ 24.95/cwt	$ (4.35)/cwt	(17.4)%
Corn (Illinois)	$ 3.66/bushel	$ 3.59/bushel	$ 0.07/bushel	1.9 %
Reuters:				
Palm Oil (CIF Rotterdam)	$ 597.00/ton	$ 711.00/ton	$ (114.00)/ton	(16.0)%
Soy meal (CIF Rotterdam)	$ 405.00/ton	$ 351.00/ton	$ 54.00/ton	15.4 %

The following table shows the average Jacobsen and Reuters prices for the fourth quarter of fiscal year 2018, compared to the average Jacobsen and Reuters prices for the third quarter of fiscal year 2018.

	Avg. Price 4th Quarter 2018	Avg. Price 3rd Quarter 2018	Increase/ (Decrease)	% Increase/ (Decrease)
Jacobsen:				
MBM (Illinois)	$ 250.18/ton	$ 264.78/ton	$ (14.60)/ton	(5.5)%
Feed Grade PM (Mid-South)	$ 267.19/ton	$ 268.13/ton	$ (0.94)/ton	(0.4)%
Pet Food PM (Mid-South)	$ 540.68/ton	$ 556.48/ton	$ 15.80/ton	(2.8)%
FM (Mid-South)	$ 405.90/ton	$ 453.58/ton	$ (47.68)/ton	(10.5)%
BFT (Chicago)	$ 25.80/cwt	$ 27.70/cwt	$ (1.90)/cwt	(6.9)%
YG (Illinois)	$ 19.91/cwt	$ 22.19/cwt	$ (2.28)/cwt	(10.3)%
Corn (Illinois)	$ 3.69/bushel	$ 3.53/bushel	$ (0.16)/bushel	4.5 %
Reuters:				
Palm Oil (CIF Rotterdam)	$ 497.00/ton	$ 566.00/ton	$ (69.00)/ton	(12.2)%
Soy meal (CIF Rotterdam)	$ 368.00/ton	$ 391.00/ton	$ (23.00)/ton	(5.9)%

Segment Results

Segment operating income for the fiscal year ended December 29, 2018 was $255.0 million, which reflects an increase of $85.6 million or 50.5% as compared to the fiscal year ended December 30, 2017.

(in thousands, except percentages)	Feed Ingredients	Food Ingredients	Fuel Ingredients	Corporate	Total
Fiscal Year Ended December 29, 2018					
Net Sales	$1,952,555	$ 1,139,126	$ 296,045	$ —	$3,387,726
Cost of sales and operating expenses	1,497,973	918,141	230,260	—	2,646,374
Gross Margin	454,582	220,985	65,785	—	741,352
Gross Margin %	23.3%	19.4%	22.2%	—%	21.9%
Loss/ (gain) on sale of assets	725	(282)	266	—	709
Selling, general and administrative expense	176,722	91,546	(4,770)	45,766	309,264
Restructuring and impairment charges	—	14,965	—	—	14,965
Depreciation and amortization	194,292	80,988	34,981	10,931	321,192
Equity in net income of Diamond Green Diesel	—	—	159,779	—	159,779
Segment operating income/ (loss)	82,843	33,768	195,087	(56,697)	255,001
Equity in net loss of other unconsolidated subsidiaries	(550)	—	—	—	(550)
Segment income/(loss)	82,293	33,768	195,087	(56,697)	254,451

(in thousands, except percentages)	Feed Ingredients	Food Ingredients	Fuel Ingredients	Corporate	Total
Fiscal Year Ended December 30, 2017					
Net Sales	$2,239,492	$ 1,156,976	$ 265,783	$ —	$3,662,251
Cost of sales and operating expenses	1,744,990	920,165	210,525	—	2,875,680
Gross Margin	494,502	236,811	55,258	—	786,571
Gross Margin %	22.1%	20.5%	20.8%	—%	21.5%
Loss/ (gain) on sale of assets	(358)	218	(97)	—	(237)
Selling, general and administrative expense	178,347	104,644	10,355	50,156	343,502
Depreciation and amortization	184,172	75,010	31,019	11,899	302,100
Equity in net income of Diamond Green Diesel	—	—	28,239	—	28,239
Segment operating income/(loss)	132,341	56,939	42,220	(62,055)	169,445
Equity in net income of unconsolidated subsidiaries	265	—	—	—	265
Segment income/(loss)	132,606	56,939	42,220	(62,055)	169,710

Feed Ingredients Segment

Raw material volume. In fiscal year 2018, the raw material processed by the Company's Feed Ingredients segment totaled 8.60 million metric tons. Compared to fiscal year 2017, overall raw material volume processed in the Feed Ingredients segment increased approximately 4.4%.

Sales. During the year ended December 29, 2018, net sales for the Feed Ingredients segment were $1,952.6 million as compared to $2,239.5 million for the year ended December 30, 2017, a decrease of approximately $286.9 million. Net sales for fats were approximately $564.7 million and $648.3 million for the years ended December 29, 2018 and December 30, 2017. Protein net sales were approximately $842.9 million and $816.1 million for the years ended December 29, 2018 and December 30, 2017. Other rendering net sales, which include hides, pet food, and service charges, were approximately $129.3 million and $286.2 million for the years ended December 29, 2018 and December 30, 2017. Total rendering net sales were approximately $1,536.9 million and $1,750.6 million for the years ended December 29, 2018 and December 30, 2017. Used cooking oil net sales were approximately $166.7 million and $185.5 million for the years ended December 29, 2018 and December 30, 2017. Bakery net sales were approximately $180.2 million and $209.8 million for the years ended December 29, 2018 and December 30, 2017 and other sales, which includes trap services, and for 2017 industrial residual services, were approximately $68.8 million and $93.6 million for the years ended December 29, 2018 and December 30, 2017.

The decrease in net sales for the Feed Ingredients segment was primarily due to the following (in millions of dollars):

	Fats	Proteins	Other Rendering	Total Rendering	Used Cooking Oil	Bakery	Other	Total
Net sales year ended December 30, 2017	$ 648.3	$ 816.1	$ 286.2	$ 1,750.6	$ 185.5	$ 209.8	$ 93.6	$ 2,239.5
Increase/(decrease) in sales volumes	34.7	55.9	—	90.6	5.6	(13.6)	—	82.6
Increase/(decrease) in finished product prices	(85.9)	16.2	—	(69.7)	(13.5)	5.0	—	(78.2)
Increase/(decrease) due to currency exchange rates	4.8	12.4	0.6	17.8	—	—	—	17.8
Freight revenue (1)	(37.2)	(57.7)	(5.1)	(100.0)	(10.9)	(21.0)	—	(131.9)
Other change (2)	—	—	(152.4)	(152.4)	—	—	(24.8)	(177.2)
Total change	(83.6)	26.8	(156.9)	(213.7)	(18.8)	(29.6)	(24.8)	(286.9)
Net sales year ended December 29, 2018	$ 564.7	$ 842.9	$ 129.3	$ 1,536.9	$ 166.7	$ 180.2	$ 68.8	$ 1,952.6

(1) The decrease in freight revenue represents the impact from adoption of the new revenue standard on current year Feed Segment revenue as compared to the same period in fiscal year 2017. See Note 22 to the Notes for impact on consolidated financial statements.

(2) The decrease in other rendering net sales was primarily due to the Company's sale of a portion of its interest in a majority owned consolidated subsidiary operating in cattle hides as part of its European operations, which resulted in the foreign subsidiary being deconsolidated and accounted for using the equity method of accounting, effective January 2018. In addition, the decrease in other net sales is due to the sale of the Company's industrial residuals business in May 2018.

Margins. In the Feed Ingredients segment for fiscal year 2018, the gross margin percentage was 23.3% as compared to 22.1% for fiscal year 2017. The increase in fiscal year 2018 was primarily due to the new revenue standard whereby the Company no longer includes billed freight in revenue, as it did in fiscal year 2017.

Segment operating income. Feed Ingredients' operating income for fiscal year 2018 was $82.8 million, a decrease of $49.5 million as compared to fiscal year 2017. Segment operating income was down in fiscal year 2018 as compared to fiscal year 2017 due to lower finished fat product prices and higher depreciation charges from increased capital expenditures that more than offset increased raw material volumes.

Food Ingredients Segment

Raw material volume. In fiscal year 2018, the raw material processed by the Company's Food Ingredients segment totaled 1.11 million metric tons. Compared to fiscal year 2017, overall raw material volume processed in the Food Ingredients segment decreased approximately (0.2)%.

Sales. Overall sales decreased in the Food Ingredients segment as a result of the permanent shut down of the Company's Hurlingham, Argentina collagen plant, a more competitive European collagen market and lower edible fat sales prices.

Margins. In the Food Ingredients segment for fiscal year 2018, the gross margin percentage was 19.4% as compared to 20.5% for fiscal year 2017. This decrease was primarily due to lower margins from European collagen due to lower sales volumes and pressure on margins from export sales, combined with an increase in raw material prices for casings and a decrease in edible fat sales prices.

Segment operating income. Food Ingredients' operating income was $33.8 million for fiscal year 2018, a decrease of $23.1 million or (40.6)% as compared to fiscal year 2017. This decrease was primarily due to the restructuring and impairment charges incurred as a result of the Hurlingham, Argentina collagen plant shut down and lower earnings in the European collagen market. The casings business delivered slightly lower earnings in fiscal year 2018 due to an increase of raw material prices as compared to fiscal year 2017. The Company's edible fat prices were lower in fiscal year 2018 as a result of competing fat markets as compared to fiscal year 2017.

Fuel Ingredients Segment

Raw material volume. In fiscal year 2018, the raw material processed by the Company's Fuel Ingredients segment totaled 1.18 million metric tons. Compared to fiscal year 2017, overall raw material volume processed in the Fuel Ingredients segment decreased approximately (0.6)%.

Sales. Overall sales increased in the Fuel Ingredients segment primarily due to higher sales volumes at Ecoson and in North America due to the reinstated fiscal year 2017 blenders tax credits recorded in the first quarter of fiscal year 2018 of approximately $12.6 million as compared to no blenders tax credits in the same period in fiscal year 2017.

Margins. In the Fuel Ingredients segment (exclusive of the equity contribution from the DGD Joint Venture) for fiscal year 2018, the gross margin percentage was 22.2% as compared to 20.8% for fiscal year 2017. This increase was primarily due to the reinstated fiscal year 2017 blenders tax credits in North America recorded in the first quarter of fiscal year 2018.

Segment operating income. The Company's Fuel Ingredients segment income (inclusive of the equity contribution from the DGD Joint Venture) for fiscal year 2018 was $195.1 million, an increase of $152.9 million or 362.3% as compared to fiscal year 2017. The increase in earnings was primarily due to the reinstated fiscal year 2017 blenders tax credits in North America recorded in the first quarter of fiscal year 2018 as compared to the lack of blenders tax credits in the same period of fiscal year 2017.

Foreign Currency

During fiscal year 2018, the U.S. dollar weakened against most of the other functional currencies used by the Company's non-domestic operations when compared to fiscal year 2017. Using actual results for fiscal year 2018 and the prior year's average foreign currency rates for fiscal year 2017 would result in a decrease in operating income of approximately $8.6 million. The average rates assumption used in this calculation was the actual fiscal average rate for fiscal year 2018 of €1.00:USD$1.18 and CAD$1.00:USD$0.77 as compared to the average rate for fiscal year 2017 of €1.00:USD$1.13 and CAD$1.00:USD$0.77, respectively.

Corporate Activities

Selling, General and Administrative Expenses. Selling, general and administrative expenses were $45.8 million during fiscal year 2018, a $4.4 million decrease from $50.2 million during fiscal year 2017. The decrease was primarily due to a decrease in corporate related compensation benefits and other corporate expenses.

Depreciation and Amortization. Depreciation and amortization charges decreased $1.0 million to $10.9 million during fiscal year 2018 as compared to $11.9 million during fiscal year 2017. The decrease was due to certain of the Company's corporate assets becoming fully depreciated as compared to fiscal year 2017.

Interest Expense. Interest expense was $86.4 million for fiscal year 2018, compared to $88.9 million for fiscal year 2017, a decrease of $2.5 million. The decrease was primarily due to an interest rate decrease on the Company's euro based senior notes, a reduction in deferred loan cost amortization and a reduction in other debt interest that more than offset an increase in revolver interest from higher fiscal year 2018 revolver borrowings as compared to fiscal year 2017.

Debt Extinguishment costs. Debt extinguishment costs were $23.5 million during fiscal year 2018, compared to none for fiscal year 2017. The costs in 2018 were due to tender and redemption premiums and the write-off of deferred loan costs related to the retirement of the 4.75% Senior Notes.

Foreign Currency Losses. Foreign currency losses were $6.4 million during fiscal year 2018, as compared to a loss of approximately $6.9 million for fiscal year 2017. The decrease in foreign currency losses was primarily due to reduction in losses on non-designated foreign exchange hedge contracts as compared to fiscal year 2017.

Loss on Disposal of Subsidiaries. Loss on disposal of subsidiaries represents a loss recorded from the sale of the Company's industrial residuals business during fiscal year 2018, that more than offset a gain recorded on the liquidation of a majority owned foreign joint venture in fiscal year 2018, as compared to a loss booked in the fourth quarter of 2017 related to the sale of a portion of a majority owned foreign subsidiary.

Other Income/Expense. Other expense was $7.6 million for fiscal year 2018, compared to $8.8 million in fiscal year 2017. The decrease in other expense for fiscal year 2018 as compared to fiscal year 2017 was primarily due to a decrease in non-service cost component of pension expense that more than offset an increase in casualty losses in fiscal year 2018 and a reduction of interest income.

Equity in Net Income/(loss) of Other Unconsolidated Subsidiaries. This primarily represents the Company's pro rata share for fiscal year 2018 net losses of its domestic unconsolidated subsidiary other than the DGD Joint Venture that more than offset net income from foreign unconsolidated subsidiaries as compared to fiscal year 2017, which included net income of foreign unconsolidated subsidiaries that more than offset net losses of the Company's domestic unconsolidated subsidiary.

Income Taxes. The Company recorded income tax expense of $12.0 million for fiscal year 2018, compared to $69.2 million of income tax benefit recorded in fiscal year 2017, an increase of $81.2 million, which was primarily due to tax law changes enacted in December 2017 with respect to several of the Company's major tax jurisdictions. Specifically, in fiscal year 2017 a tax benefit of $75.0 million was recorded due to the Tax Cuts and Jobs Act (the “Tax Act” or “U.S. tax reform”) in the United States, which was enacted on December 22, 2017 and a tax benefit of $13.9 million was recorded for tax law changes in Belgium and France (“European tax law changes”). The effective tax rate for fiscal year 2018 and fiscal year 2017 was 10.2% and (107.7)%, respectively. The effective tax rate for fiscal year 2018 differs from the statutory rate of 21% due primarily to the retroactive reinstatement of the biofuel tax incentive for 2017 during 2018, tax law changes in the Netherlands, and changes in valuation allowances primarily related to deferred tax assets for tax losses that are not expected to be utilized in future years. The biofuel tax incentive expired as of the end of fiscal year 2017. Excluding the impact of the 2017 biofuel tax incentive and tax law changes, the effective tax rate for fiscal year 2018 is 34.4%. The effective tax rate for fiscal year 2017 differs from the statutory rate of 35% due primarily to the impact of U.S. tax reform, European tax law changes, the relative mix of earnings among jurisdictions with different tax rates, and subpart F income. Excluding the impact of U.S. tax reform and European tax law changes, the effective tax rate for fiscal year 2017 is 30.8%.

Non-U.S. GAAP Measures

For a discussion of the reasons the Company's management believes the following Non-GAAP financial measures provide useful information to investors and the purposes for which the Company's management uses such measures, see “Results of Operations - Fiscal Year Ended December 28, 2019 Compared to Fiscal Year Ended December 29, 2018 - Non-U.S. GAAP Measures.”

Reconciliation of Net Income to (Non-GAAP) Adjusted EBITDA and (Non-GAAP) Pro Forma Adjusted EBITDA
Fiscal Year 2018 As Compared to Fiscal Year 2017

	Fiscal Year Ended	
(dollars in thousands)	**December 29, 2018**	**December 30, 2017**
Net income attributable to Darling	$ 101,496	$ 128,468
Depreciation and amortization	321,192	302,100
Interest expense	86,429	88,926
Income tax expense/(benefit)	12,031	(69,154)
Restructuring and impairment charges	14,965	—
Foreign currency loss	6,431	6,898
Other expense, net	7,562	8,801
Debt extinguishment costs	23,509	—
Loss on disposal of subsidiaries	12,545	885
Equity in net (income) of Diamond Green Diesel	(159,779)	(28,239)
Equity in net loss/(income) of other unconsolidated subsidiaries	550	(265)
Net income attributable to noncontrolling interests	4,448	4,886
Adjusted EBITDA (Non-GAAP)	$ 431,379	$ 443,306
Foreign currency exchange impact (1)	(8,565)	—
Pro forma Adjusted EBITDA to Foreign Currency (Non-GAAP)	$ 422,814	$ 443,306
DGD Joint Venture Adjusted EBITDA (Darling's Share)	$ 174,013	$ 43,198
Darling plus Darling's share of DGD Joint Venture Adjusted EBITDA	$ 605,392	$ 486,504

(1) The average rate assumption used in this calculation was the actual fiscal average rate for the fiscal year ended December 29, 2018 of €1.00:USD$1.18 and CAD$1.00:USD$0.77 as compared to the average rate for the fiscal year ended December 30, 2017 of €1.00:USD$1.13 and CAD$1.00:USD$0.77, respectively.

For the fiscal year ended December 29, 2018, the Company generated Adjusted EBITDA (Non-GAAP) of $431.4 million, as compared to $443.3 million for the year ended December 30, 2017. The decrease is attributable to lower earnings in the Feed Ingredients and Food Ingredients segment.

On a Pro forma Adjusted EBITDA to Foreign Currency (Non-GAAP) basis, the Company would have generated $422.8 million for the fiscal year ended December 29, 2018, as compared to $443.3 million for the year ended December 30, 2017.

DGD Joint Venture Adjusted EBITDA (Darling's Share) is not reflected in the Adjusted EBITDA, the Pro forma Adjusted EBITDA, or the Pro forma Adjusted EBITDA to Foreign Currency (Non-GAAP). See Note 2 to Notes to Consolidated Financial Statements included herein for financial information regarding the DGD Joint Venture.

FINANCING, LIQUIDITY, AND CAPITAL RESOURCES

Indebtedness

Certain Debt Outstanding at December 28, 2019. On December 28, 2019, debt outstanding under the Company's Amended Credit Agreement, the Company's 5.25% Notes and the Company's 3.625% Notes consists of the following (in thousands):

Senior Notes:		
5.25 % Notes due 2027	$	500,000
Less unamortized deferred loan costs		(6,494)
Carrying value of 5.25% Notes due 2027	$	493,506
3.625 % Notes due 2026 - Denominated in euros	$	574,096
Less unamortized deferred loan costs		(6,982)
Carrying value of 3.625% Notes due 2026	$	567,114
Amended Credit Agreement:		
Term Loan B	$	495,000
Less unamortized deferred loan costs		(7,696)
Carrying value of Term Loan B	$	487,304
Revolving Credit Facility:		
Maximum availability	$	1,000,000
Ancillary Facilities		45,490
Borrowings outstanding		39,000
Letters of credit issued		3,636
Availability	$	911,874
Other Debt	$	62,501

At December 28, 2019, the U.S. dollar was stronger as compared to the euro and weaker as compared to the Canadian dollar at December 29, 2018. Using the euro and Canadian dollar based debt outstanding at December 29, 2018 and comparing the closing balance sheet rates at December 28, 2019 to those at December 29, 2018, the U.S. dollar debt balances of euro based debt decreased by $16.2 million and the U.S. dollar debt balances of Canadian based debt increased by approximately $0.2 million, at December 28, 2019. The closing balance sheet rate assumptions used in this calculation were the actual fiscal closing balance sheet rate at December 29, 2018 of €1.00:USD$1.114750 and CAD$1.00:USD$0.763789 as compared to the closing balance sheet rate at December 30, 2017 of €1.00:USD$1.146600 and CAD$1.00:USD$0.735401, respectively.

Senior Secured Credit Facilities. On January 6, 2014, Darling, Darling International Canada Inc. ("Darling Canada") and Darling International NL Holdings B.V. ("Darling NL") entered into a Second Amended and Restated Credit Agreement (as subsequently amended, the "Amended Credit Agreement"), restating its then existing Amended and Restated Credit Agreement dated September 27, 2013, with the lenders from time to time party thereto, JPMorgan Chase Bank, N.A., as Administrative Agent, and the other agents from time to time party thereto. Effective December 18, 2017, the Company, and certain of its subsidiaries entered into an amendment (the "Fifth Amendment") with its lenders to the Amended Credit Agreement. Among other things, the Fifth Amendment (i) refinanced the term B loans under the Amended Credit Agreement with new term B loans in an aggregate principal amount of $525.0 million with a maturity date of December 18, 2024; (ii) adjusted the applicable margin pricing on borrowings under the term B loan; (iii) modified certain of the negative covenants to increase the allowances for certain actions, including debt and investments; and (iv) made other updates and changes. Effective December 16, 2016, the Company, and certain of its subsidiaries entered into an amendment (the "Fourth Amendment") with its lenders to the Amended Credit Agreement. Among other things, the Fourth Amendment extended the maturity date of the term A loans and revolving credit facility loans under the Amended Credit Agreement from September 27, 2018 to December 16, 2021. For more information regarding the Amended Credit Agreement see Note 10 of Notes to Consolidated Financial Statements included herein.

- As of December 28, 2019, the Company had availability of $911.9 million under the revolving loan facility, taking into account an aggregate of $39.0 million in outstanding borrowings, $45.5 million of ancillary facilities and letters of credit issued of $3.6 million.

- As of December 28, 2019, the Company has borrowed all $350.0 million under the term loan A facility and has repaid all $350.0 million, which when repaid, cannot be reborrowed.

- As of December 28, 2019, the Company has borrowed all $525.0 million under the terms of the term loan B facility and repaid approximately $30.0 million, which when repaid, cannot be reborrowed. The term loan B facility is repayable in quarterly installments of 0.25% of the aggregate principal amount of the relevant term loan B facility on the last day of each March, June, September and December of each year commencing on the last day of each month falling on or after the last day of the first full quarter following December 18, 2017, and continuing until the last day of each quarter period ending immediately prior to December 18, 2024; and one final installment in the amount of the relevant term loan B facility then outstanding, due on December 18, 2024. The term loan B facility will mature on December 18, 2024.

- The interest rate applicable to any borrowings under the term loan B facility will equal the base rate plus 1.00% or LIBOR plus 2.00%.

5.25% Senior Notes due 2027. On April 3, 2019, Darling issued and sold $500.0 million aggregate principal amount of 5.25% Senior Notes due 2027 (the "5.25% Notes"). The 5.25% Notes, which were offered in a private offering, were issued pursuant to a Senior Notes Indenture, dated as of April 3, 2019 (the "5.25% Indenture"), among Darling, the subsidiary guarantors party thereto from time to time, and Regions Bank, as trustee. The gross proceeds from the sale of the Notes, together with cash on hand, were used to refinance all of the Company's formerly outstanding 5.375% Senior Notes due 2022 (the "5.375% Notes"), by cash tender offer for and redemption of all of the Company's then-outstanding 5.375% Notes, to pay the discount of the initial purchasers and to pay other fees and expenses related to the offering of the 5.25% Notes. The refinancing of the 5.375% Notes was completed in the second quarter of 2019. For a description of the terms of the 5.25% Notes see Note 10 of Notes to Consolidated Financial Statements.

3.625 % Senior Notes due 2026. On May 2, 2018, Darling Global Finance B.V. issued and sold €515 million aggregate principal amount of 3.625% Senior Notes due 2026 (the "3.625% Notes"). The 3.625% Notes, which were offered in a private offering, were issued pursuant to a Senior Notes Indenture, dated as of May 2, 2018, among Darling Global Finance B.V., Darling, the subsidiary guarantors party thereto from time to time, Citibank, N.A., London Branch, as trustee and principal paying agent, and Citigroup Global Markets Deutschland AG, as principal registrar. The gross proceeds of the offering, together with borrowings under the Company's revolving credit facility, were used to refinance all of the then Company's formerly outstanding 4.75% Senior Notes due 2022 (the "4.75% Notes") by cash tender offer and redemption of those notes and to pay any applicable premiums for the refinancing, to pay the commission of the initial purchasers of the 3.625% Notes and to pay the other fees and expenses related to the offering. The refinancing of the 4.75% Notes was completed in the second quarter of 2018. For a description of the terms of the 3.625% Notes see Note 10 of Notes to Consolidated Financial Statements.

Other debt consists of U.S., Canadian and European ancillary and overdraft facilities and capital lease obligations and note arrangements in Brazil, China and Europe that are not part of the Company's Amended Credit Agreement, 5.25% Notes or 3.625% Notes.

The classification of long-term debt in the Company's December 28, 2019 consolidated balance sheet is based on the contractual repayment terms of the 5.25% Notes, the 3.625% Notes and debt issued under the Amended Credit Agreement.

As a result of the Company's borrowings under its Amended Credit Agreement, the 5.25% Indenture and the 3.625% Indenture, the Company is highly leveraged. Investors should note that, in order to make scheduled payments on the indebtedness outstanding under the Amended Credit Agreement, the 5.25% Notes and the 3.625% Notes, and otherwise, the Company will rely in part on a combination of dividends, distributions and intercompany loan repayments from the Company's direct and indirect U.S. and foreign subsidiaries. The Company is prohibited under the Amended Credit Agreement, the 5.25% Indenture and the 3.625% Indenture from entering (or allowing such subsidiaries to enter) into contractual limitations on the Company's subsidiaries' ability to declare dividends or make other payments or distributions to the Company. The Company has also attempted to structure the Company's consolidated indebtedness in such a way as to maximize the Company's ability to move cash from the Company's subsidiaries to Darling or another subsidiary that will have fewer limitations on the ability to make upstream payments, whether to Darling or directly to the Company's lenders as a Guarantor. Nevertheless, applicable laws under which the Company's direct and indirect subsidiaries are formed may provide limitations on such dividends, distributions and other payments. In addition, regulatory authorities in various countries where the Company operates or where the Company imports or exports products may from time to time impose import/export limitations, foreign exchange controls or currency devaluations that may limit the Company's access to profits from the Company's subsidiaries or otherwise negatively impact the Company's financial condition and therefore reduce the Company's ability to make required payments under Amended Credit Agreement, the 5.25% Notes and the 3.625% Notes, or otherwise. In addition, fluctuations in foreign exchange values may have a negative impact on the Company's ability to repay indebtedness denominated in U.S. or Canadian dollars or euros. See "Risk Factors - Our business may be adversely impacted by fluctuations in exchange rates, which could affect our ability to comply with our financial covenants" and "- Our ability to repay our indebtedness depends in part on the performance of our subsidiaries, including our non-guarantor subsidiaries, and their ability to make payments" in Item 1A of this Annual Report on Form 10-K for the fiscal year ended December 28, 2019.

As of December 28, 2019, the Company believes it is in compliance with all financial covenants under the Amended Credit Agreement, as well as all of the other covenants contained in the Amended Credit Agreement, the 5.25% Indenture and the 3.625% Indenture.

Working Capital and Capital Expenditures

On December 28, 2019, the Company had working capital of $228.9 million and its working capital ratio was 1.33 to 1 compared to working capital of $357.4 million and a working capital ratio of 1.66 to 1 on December 29, 2018. At December 28, 2019, the Company had unrestricted cash of $72.9 million and funds available under the revolving credit facility of $911.9 million, compared to unrestricted cash of $107.3 million and funds available under the revolving credit facility of $929.8 million at December 29, 2018. The Company diversifies its cash investments by limiting the amounts deposited with any one financial institution and invests primarily in government-backed securities.

Net cash provided by operating activities was $362.6 million and $398.6 million for the fiscal years ended December 28, 2019 and December 29, 2018, respectively, a decrease of $36.0 million due primarily to an increase in net income that was mostly offset by equity in net income of the DGD Joint Venture and to changes in operating assets and liabilities that include a decrease in cash provided by accounts receivable of approximately $19.8 million, a decrease in prepaid expenses and inventory of $41.5 million, a decrease in other of approximately $8.8 million, an increase in income taxes refundable/payable of approximately $19.3 million and an increase in accounts payable and accrued expense of approximately $17.9 million. Cash used by investing activities was $338.1 million during fiscal year 2019, compared to $342.4 million in fiscal year 2018, a decrease in cash used of $4.3 million, primarily due to a decrease in proceeds from the sale of assets that was more than offset by an increase in cash received from insurance. Net cash used by financing activities was $54.9 million during fiscal year 2019, compared to $47.6 million in fiscal year 2018, an increase in cash used of $7.3 million, primarily due to purchases of common stock that more than offset a decrease in debt payments as compared to fiscal year 2018.

Capital expenditures of $359.5 million were made during fiscal year 2019 as compared to $321.9 million in fiscal year 2018, an increase of $37.6 million, or 11.7%. The increase was primarily due to capital expenditures for expansion in fiscal 2019. In fiscal year 2020, the Company expects to incur approximately $236.0 million in maintenance and compliance type capital expenditures and approximately $70.0 million for new construction (including expansions) for a total of approximately $306.0 million. These costs are expected to be financed using cash flows from operations. Capital expenditures related to compliance with environmental regulations were $37.4 million in fiscal year 2019, $32.1 million in fiscal year 2018 and $27.5 million in fiscal year 2017.

Accrued Insurance and Pension Plan Obligations

Based upon the annual actuarial estimate, current accruals and claims paid during fiscal year 2019, the Company has accrued approximately $9.7 million as of December 28, 2019 that it expects will become due during the next twelve months in order to meet obligations related to the Company's self insurance reserves and accrued insurance obligations, which are included in current accrued expenses at December 28, 2019. The self insurance reserve is composed of estimated liability for claims arising for workers' compensation and for auto liability and general liability claims. The self insurance reserve liability is determined annually, based upon a third party actuarial estimate. The actuarial estimate may vary from year to year, due to changes in costs of health care, the pending number of claims and other factors beyond the control of management of the Company.

Based upon current actuarial estimates, the Company expects to make payments of approximately $0.9 million in order to meet minimum pension funding requirements to its domestic plans in fiscal year 2020. In addition, the Company expects to make payments of approximately $3.4 million under its foreign pension plans in fiscal year 2020. The minimum pension funding requirements are determined annually, based upon a third party actuarial estimate. The actuarial estimate may vary from year to year, due to fluctuations in return on investments or other factors beyond the control of management of the Company or the administrator of the Company's pension funds. No assurance can be given that the minimum pension funding requirements will not increase in the future. The Company has made required and tax deductible discretionary contributions to its domestic pension plans in fiscal year 2019 and fiscal year 2018 of approximately $0.9 million and $1.0 million, respectively. Additionally, the Company has made required and tax deductible discretionary contributions to its foreign pension plans in fiscal year 2019 of approximately $3.4 million, as compared to $3.5 million in contributions in fiscal year 2018.

The U.S. Pension Protection Act of 2006 ("PPA") went into effect in January 2008. The stated goal of the PPA is to improve the funding of U.S. pension plans. U.S. plans in an under-funded status are required to increase employer contributions to improve the funding level within PPA timelines. Volatility in the world equity and other financial markets could have a material negative impact on U.S. pension plan assets and the status of required funding under the PPA. The Company participates in various U.S. multiemployer pension plans which provide defined benefits to certain employees covered by labor contracts. These plans are not administered by the Company and contributions are determined in accordance with provisions of negotiated labor contracts to meet their pension benefit obligations to their participants. The Company's contributions to each individual U.S. multiemployer plan represent less than 5% of the total contributions to each such plan. Based on the most currently available information, the Company has determined that, if a withdrawal were to occur, withdrawal liabilities on two of the U.S. plans in which the Company currently participates could be material to the Company, with one of these material plans certified as critical or red zone. With respect to the other U.S. multiemployer pension plans in which the Company participates and which are not individually significant, five plans have certified as critical or red zone and two have certified as endangered or yellow zone, as defined by the PPA. The Company has received notices of withdrawal liability from five U.S. multiemployer pension plans in which it participated. As a result, the Company has an accrued aggregate current liability of approximately $6.0 million representing the present value of scheduled withdrawal liability payments under these multiemployer plans. While the Company has no ability to calculate a possible current liability for under-funded multiemployer plans that could terminate or could require additional funding under the PPA, the amounts could be material.

DGD Joint Venture

The Company announced on January 21, 2011 that a wholly-owned subsidiary of Darling entered into a limited liability company agreement with Valero to form the DGD Joint Venture. The DGD Joint Venture is owned 50% / 50% with Valero and was formed to design, engineer, construct and operate the DGD Facility, which as a result of its recently expanded capacity is now capable of processing approximately 20,000 barrels per day of input feedstock to produce renewable diesel fuel and certain other co-products, and is located adjacent to Valero's refinery in Norco, Louisiana. The DGD Joint Venture reached mechanical completion and began the production of renewable diesel in late June 2013. Effective May 1, 2019, the DGD LLC Agreement was amended and restated for the purpose of updating the agreement in certain respects, including to remove certain provisions that were no longer relevant and to add new provisions relating to the DGD Joint Venture's recently approved expansion project to construct a new, parallel facility located next to the current facility, as further described below.

On May 1, 2019, Darling, through its wholly owned subsidiary Darling Green Energy LLC, ("Darling Green"), and Diamond Alternative Energy, LLC, a wholly owned subsidiary of Valero ("Diamond Alternative" and together with Darling Green, the "DGD Lenders") entered into a revolving loan agreement (the "DGD Loan Agreement") with the DGD Joint Venture. The DGD Lenders have committed to make loans available to the DGD Joint Venture in the total amount of $50.0 million with each lender committed to $25.0 million of the total commitment. Any borrowings by the DGD Joint Venture under the DGD Loan Agreement are at the applicable annum rate equal to the sum of (a) the LIBO Rate (meaning Reuters BBA Libor Rates Page 3750) on such day plus (b) 2.50%. The DGD Loan Agreement matures on April 29, 2020, unless extended by agreement of the parties. The DGD Loan Agreement replaces a similar agreement with lower commitment levels that expired on December 31, 2018. As of December 28, 2019, no amounts are owed to the DGD Lenders under the DGD Loan Agreement.

Based on the sponsor support agreements executed in connection with the initial construction of the DGD Facility, the Company contributed a total of approximately $111.7 million for completion of the DGD Facility including the Company's portion of cost overruns and working capital funding. As of December 28, 2019, under the equity method of accounting the Company has an investment in the DGD Joint Venture of approximately $661.5 million included on the consolidated balance sheet.

In August 2018, the DGD Joint Venture completed an expansion project that increased the DGD Facility's annual production capacity from 160 million gallons of renewable diesel to 275 million gallons and expanded outbound logistics for servicing the many developing low carbon fuel markets around North America and worldwide. In November 2018, the joint venture partners approved the DGD Joint Venture moving forward with another expansion project to construct a new, parallel facility (the "New Facility") located next to the current facility. The New Facility is expected to grow the DGD Joint Venture's annual production capacity by an additional 400 million gallons from the current capacity of 275 million gallons of renewable diesel to 675 million gallons of renewable diesel and provide the capability to separate naphtha for sale into low carbon fuel markets. In addition, the expansion project includes further expanded inbound and outbound logistics for servicing the many developing low carbon fuel markets around North America and worldwide. The DGD Joint Venture estimates completion and startup of the New Facility in the fourth quarter of 2021, and the total cost of the expansion project, including the naphtha production and improved logistics capability, is estimated to be approximately $1.1 billion. Based on forecasted margins as of the date of this report, the expansion project is expected to be substantially funded by DGD Joint Venture cash flow; however, the DGD LLC Agreement provides that until such time as the New Facility is complete and operational, the joint venture partners shall be required to make capital contributions or, if they agree, loans, to the DGD Joint Venture should the excess available cash in the DGD Joint Venture, as determined on specified dates and in accordance with the provisions contained in the DGD LLC Agreement, fall below $50 million.

In April 2019, the joint venture partners adopted a distribution policy that, unless earlier terminated by the partners, will remain in place through the construction and completion of the New Facility. Pursuant to the distribution policy, the DGD Joint Venture will make quarterly distributions to the partners to the extent that distributable cash (as determined in accordance with the policy) exceeds $50 million and as allowed by the DGD Joint Venture's forward looking cash forecast. During the year ended December 28, 2019, the DGD Joint Venture made approximately $67.5 million distributions to each of the partners.

The Company's original investment in DGD has expanded since 2011 to the point that it is now integral to how Darling operates its business. Darling traditionally collected and converted used cooking oil and animal fats into feed ingredients which were sold on a caloric value to feed animals as well as for industrial technical uses. Over the past decade, the world's increasing focus on climate change and greenhouse gas has provided a new finished market for the Company's finished fats ingredients. With Darling's significant fats ownership, this has and continues to transform how Darling operates. In 2018, a large portion of Darling's total U.S. finished fats products were sold to the DGD Facility as feedstock for renewable diesel. This percentage is expected to noticeably increase both in 2019 and beyond due to the recent DGD capacity expansion completed in August 2018 and the even larger expansion to be finished in late 2021. In 2019 and 2018, DGD was Darling's largest finished product customer in terms of sales, with Darling recording sales of $208.7 million and $131.8 million to DGD, respectively.

From a procurement, production and distribution standpoint, DGD has become integral to Darling's base business. DGD is integral to the Company's operations via the combined vertical operating structure from collecting raw fats, to processing collected fats at Darling facilities nationwide to transporting the refined fats to the DGD facility as feedstock. The Darling supply chain has become more efficient and sustainable with transparency for verification to obtain full value to low carbon intensity markets. The development of the low carbon markets in North America and Europe has influenced how Darling operates its core business and has also been a driver for the recent DGD expansions, which are making DGD much more relevant to Darling's earnings. Since 2011 when construction began on DGD, Darling has invested substantially to increase its U.S. railcar fleet to efficiently manage nationwide transportation of Darling fats to DGD. Additionally, Darling acquired an Iowa location on the Mississippi River that further enhances the ability of the Company's Midwest network of facilities to collect and deliver feedstocks to DGD via water, rail or truck from a centralized location. Darling has also stepped up collection efforts by providing indoor used cooking oil collection units in exchange for extended collection contracts at eating establishments and has moved to more of a centralized digital marketing effort with restaurant chains and franchise groups and invested in internet search engine key words to improve visibility with restaurants. The Company also includes DGD in marketing efforts to emphasize environmental sustainability that restaurants participate in when their used cooking oil is collected by Darling. From a production standpoint, Darling now isolates used cooking oil from other fats to preserve identification to qualify for a higher carbon intensity value. As a result, the Company has reclassified its equity in net income of the DGD Joint Venture to operating income for all periods presented.

In September 2019, the Company announced that the DGD Joint Venture was initiating an advanced engineering and development cost review for construction of a new renewable diesel plant to be located in Port Arthur, Texas. The proposed facility under review would be designed to produce 400 million gallons of renewable diesel annually as well as 40 million gallons of renewable naphtha. The final investment decision on the project is expected in 2021, subject to further engineering, obtaining necessary permits, and approval by the boards of the Company and Valero. If the decision is made to move forward, new plant construction could begin in 2021, with expected operations commencing in 2024.

Financial Impact of Significant Debt Outstanding

The Company has a substantial amount of indebtedness, which could make it more difficult for us to satisfy our obligations to our financial lenders and our contractual and commercial commitments, limit our ability to obtain additional financing to fund future working capital, capital expenditures, acquisitions or other general corporate requirements on commercially reasonable terms or at all, require us to use a substantial portion of our cash flows from operations to pay principal and interest on our indebtedness instead of other purposes, thereby reducing the amount of our cash flows from operations available for working capital, capital expenditures, acquisitions and other general corporate purposes, increase our vulnerability to adverse economic, industry and business conditions, expose us to the risk of increased interest rates as certain of our borrowings are at variable rates of interest, limit our flexibility in planning for, or reacting to, changes in our business and the industry in which we operate, place us at a competitive disadvantage compared to other, less leveraged competitors, and/or increase our cost of borrowing.

Cash Flows and Liquidity Risks

Management believes that the Company's cash flows from operating activities consistent with the level generated in fiscal year 2019, unrestricted cash and funds available under the Amended Credit Agreement, will be sufficient to meet the Company's working capital needs and maintenance and compliance-related capital expenditures, scheduled debt and interest payments, income tax obligations, and other contemplated needs through the next twelve months. Numerous factors could have adverse consequences to the Company that cannot be estimated at this time, such as those factors discussed below under the heading "Forward Looking Statements". These factors, coupled with volatile prices for natural gas and diesel fuel, currency exchange fluctuations, general performance of the U.S. and global economies, disturbances in world financial, credit, commodities and stock markets, and any decline in consumer confidence, including the inability of consumers and companies to obtain credit due to lack of liquidity in the financial markets, among others, could negatively impact the Company's results of operations in fiscal year 2020 and thereafter. The Company reviews the appropriate use of unrestricted cash periodically. As of the date of this report, no decision has been made as to non-ordinary course material cash usages at this time; however, potential usages could include: opportunistic capital expenditures and/or acquisitions and joint ventures; investments relating to the Company's renewable energy strategy, including, without limitation, potential required funding obligations with respect to the DGD Joint Venture expansion project or potential investments in additional renewable diesel and/or biodiesel projects; investments in response to governmental regulations relating to human and animal food safety or other regulations; unexpected funding required by the legislation, regulation or mass termination of multiemployer plans; and paying dividends or repurchasing stock, subject to limitations under the Amended Credit Agreement, the 5.25% Notes and the 3.625% Notes, as well as suitable cash conservation to withstand adverse commodity cycles. In August 2015, the Company's Board of Directors approved a share repurchase program of up to an aggregate of $100.0 million of the Company's Common Stock depending on market conditions. On August 7, 2017, the Company's Board of Directors approved the extension for an additional two years of its previously announced share repurchase program and refreshed the amount of the program back up to its original amount of an aggregate of $100.0 million of the Company's Common Stock depending on market conditions. To that point, the Company had previously repurchased $10.9 million shares of its Common stock under the program. The repurchases may be made from time to time on the open market at prevailing market prices or in negotiated transactions off the market. On November 6, 2018, the Board approved an increase in the share repurchase program from $100.0 million to $200.0 million and extended the term of the program for an additional year to August 13, 2020. Repurchases may occur through August 13, 2020, unless extended or shortened by the Board of Directors. Since the inception of the share repurchase program, the Company has repurchased approximately $30.1 million of its common stock in open market purchases and, as of the date of this report, has $180.8 million remaining in its share repurchase program.

Each of the factors described above has the potential to adversely impact the Company's liquidity in a variety of ways, including through reduced raw materials availability, reduced finished product prices, reduced sales, potential inventory buildup, increased bad debt reserves, potential impairment charges and/or higher operating costs.

Sales prices for the principal products that the Company sells are typically influenced by sales prices for agricultural-based ingredients, the prices of which are based on established commodity markets and are subject to volatile changes. Any decline in these prices has the potential to adversely impact the Company's liquidity. Any of a decline in raw material availability, a decline in agricultural-based alternative ingredients prices, increases in energy prices or the impact of U.S. and foreign regulation (including, without limitation, China), changes in foreign exchange rates, imposition of currency controls and currency devaluations has the potential to adversely impact the Company's liquidity. A decline in commodities prices, a rise in energy prices, a slowdown in the U.S. or international economy or other factors, could cause the Company to fail to meet management's expectations or could cause liquidity concerns.

CONTRACTUAL OBLIGATIONS AND OTHER COMMERCIAL COMMITMENTS

The following table summarizes the Company's expected material contractual payment obligations, including both on- and off-balance sheet arrangements at December 28, 2019 (in thousands):

	Total	Less than 1 Year	1 – 3 Years	3 – 5 Years	More than 5 Years
Contractual obligations(a):					
Long-term debt obligations (b)	$ 1,608,096	$ 29,000	$ 10,000	$ 495,000	$ 1,074,096
Operating lease obligations (c)	162,626	46,062	57,959	32,517	26,088
Capital lease obligations (c)	151	119	23	9	—
Estimated interest payable (d)	418,030	69,721	137,304	121,613	89,392
Purchase commitments (e)	99,053	84,520	14,533	—	—
Pension funding obligation (f)	4,822	4,822	—	—	—
Other obligations (b)	62,356	61,881	239	58	178
Total	$ 2,355,134	$ 296,125	$ 220,058	$ 649,197	$ 1,189,754

(a) The above table does not reflect uncertain tax positions at December 28, 2019. The Company's uncertain tax position is approximately $7.8 million.

(b) Represents debt obligations outstanding as of December 28, 2019. See Note 10 to Notes to Consolidated Financial Statements.

(c) See Note 9 to Notes to Consolidated Financial Statements.

(d) Interest payable was calculated using the current rate for the debt that was outstanding as of December 28, 2019.

(e) Purchase commitments were determined based on specified contracts for natural gas, diesel fuel and finished product purchases.

(f) Pension funding requirements are determined annually based upon a third party actuarial estimate. The Company expects to make approximately $4.8 million in required contributions to domestic and foreign pension plans in fiscal year 2020. The Company is not able to estimate pension funding requirements beyond the next twelve months. The accrued pension benefit liability was approximately $56.6 million at the end of fiscal year 2019. The Company knows certain of the multiemployer pension plans that have not terminated to which it contributes and which are not administered by the Company were under-funded as of the latest available information, and while the Company has no ability to calculate a possible current liability for the under-funded multiemployer plan to which the Company contributes, the amounts could be material.

The Company's off-balance sheet contractual obligations and commercial commitments as of December 28, 2019 relate to letters of credit, foreign bank guarantees, forward purchase agreements and employment agreements. The Company has excluded these items from the balance sheet in accordance with U.S. GAAP.

The following table summarizes the Company's other commercial commitments, including both on- and off-balance sheet arrangements that are part of the Company's Amended Credit Agreement and other foreign bank guarantees that are not a part of the Company's Amended Credit Agreement at December 28, 2019 (in thousands):

Other commercial commitments:		
Standby letters of credit	$	3,636
Standby letters of credit (ancillary facility)		20,490
Foreign bank guarantees		11,430
Total other commercial commitments:	$	35,556

OFF BALANCE SHEET OBLIGATIONS

Based upon the underlying purchase agreements, the Company has commitments to purchase $95.7 million of commodity products, consisting of approximately $52.2 million of finished and raw material products and approximately $43.5 million of natural gas and diesel fuel commitments during the next two years, which are not included in liabilities on the Company's balance sheet at December 28, 2019. These purchase agreements are entered into in the normal course of the Company's business and are not subject to derivative accounting. The commitments will be recorded on the balance sheet of the Company when delivery of these commodities occurs and ownership passes to the Company during the next two years, in accordance with U.S. GAAP.

CRITICAL ACCOUNTING POLICIES

The Company follows certain significant accounting policies when preparing its consolidated financial statements. A complete summary of these policies is included in Note 1 of Notes to Consolidated Financial Statements.

Certain of the policies require management to make significant and subjective estimates or assumptions that may deviate from actual results. In particular, management makes estimates regarding fair value of the Company's reporting units and future cash flows with respect to assessing potential impairment of both long-lived assets and goodwill and pension liability. Each of these estimates is discussed in greater detail in the following discussion.

Long-Lived Assets

The Company reviews the carrying value of long-lived assets for impairment when events or changes in circumstances indicate that the carrying amount of an asset, or related asset group, may not be recoverable from estimated future undiscounted cash flows. Recoverability of assets to be held and used is measured by a comparison of the carrying amount of an asset or asset group to estimated undiscounted future cash flows expected to be generated by the asset or asset group. If the carrying amount of the asset exceeds its estimated future cash flows, an impairment charge is recognized by the amount by which the carrying amount of the asset exceeds the fair value of the asset. In fiscal year 2018, the Company shut down the operations at its Hurlingham, Argentina plant and recorded impairment charges related to its long-lived assets of approximately $2.4 million. In fiscal year 2019, no triggering event occurred requiring that the Company perform testing of its long-lived assets for impairment.

Goodwill Valuation

The Company performed the annual goodwill and indefinite-lived intangible assets impairment assessments at October 26, 2019 and concluded that the Company's goodwill for all reporting units and all recorded indefinite-lived intangible assets were not impaired as of that date. Goodwill and indefinite lived assets are tested annually or more frequently if events or changes in circumstances indicate that the asset might be impaired. The Company follows a two-step process for testing impairment. First, the fair value of each reporting unit is compared to its carrying value to determine whether an indication of impairment exists. If impairment is indicated, then the fair value of the reporting unit's goodwill is determined by allocating the unit's fair value of its assets and liabilities (including any unrecognized intangible assets) as if the reporting unit had been acquired in a business combination. The amount of impairment for goodwill is measured as the excess of its carrying value over its implied fair value.

Based on the Company's annual impairment testing at October 26, 2019, October 27, 2018 and October 28, 2017, the fair values of the Company's reporting units containing goodwill exceeded the related carrying value. However, based on the Company's annual impairment testing at October 26, 2019, the fair value of four of the Company's eight reporting units was less than 30% in excess of its carrying value and one reporting unit (Canada Feed) was less than 10% in excess of the estimated fair value with goodwill of approximately $178.6 million, which was substantially less than the percentage by which the other reporting units with goodwill exceeded their carrying values. The Company determined the fair value of reporting units with the assistance of a valuation expert who assisted the Company primarily using the Income Approach to determine the fair value of the Company's reporting units. Key assumptions that impacted the discounted cash flow model were raw material volumes, gross margins, terminal growth rates and discount rates. It is possible, depending upon a number of factors that are not determinable at this time or within the control of the Company, that the fair value of these four reporting units could decrease in the future and result in an impairment to goodwill. The amount of goodwill allocated to these four reporting units was approximately $504.0 million. The Company's management believes the biggest risk to these reporting units is decreasing finished product prices impacting gross margins and an economic slowdown that would impact raw material suppliers. Goodwill was approximately $1,223.3 million and $1,229.2 million at December 28, 2019 and December 29, 2018, respectively.

Pension Liability

The Company has retirement and pension plans covering a substantial number of its domestic and foreign employees. Major assumptions used in the accounting for these employee benefit plans include the discount rate, expected return on plan assets, rate of increase in employee compensation levels, mortality rates and trends in health care costs. The actuarial assumptions used may differ materially from actual results due to changing market and economic conditions, higher or lower withdrawal rates or longer or shorter life spans of participants. These differences may result in a significant impact to the amount of net periodic benefit cost recorded in future periods.

The discount rate applied to the Company's pension liability is the interest rate used to calculate the present value of the pension benefit obligation. The weighted average discount rate was 2.77% at December 28, 2019 and 3.68% at December 29, 2018, respectively. The net periodic benefit cost for fiscal year 2020 would increase by approximately $1.2 million if the discount rate was 0.5% lower at a weighted average of 2.27%. The net periodic benefit cost for fiscal year 2020 would decrease by approximately $1.1 million if the discount rate was 0.5% higher at a weighted average of 3.27%.

NEW ACCOUNTING PRONOUNCEMENTS

In December 2019, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2019-12, Simplifying the Accounting for Income Taxes. This ASU amends Topic 740 Income Taxes, which will eliminate certain exceptions in accounting for income taxes, improves consistency in application and clarifies existing guidance. The standard is effective for fiscal years beginning after December 15, 2020, with early adoption permitted. The Company is currently evaluating the impact of this standard.

In August 2018, the FASB issued ASU No. 2018-15, Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement that is a Service Contract. This ASU amends Subtopic 350-40, *Intangibles - Goodwill and Other Internal - Use Software*, which will align the requirements for capitalizing implementation costs incurred in a hosting arrangement that is a service contract with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software. The standard is effective for fiscal years beginning after December 15, 2019 and for interim periods therein, with early adoption permitted. Implementation should be applied either retrospectively or prospectively to all implementation costs incurred after the date of adoption. The Company adopted the new accounting standard effective December 30, 2018 and the adoption did not have a material impact on the Company's consolidated financial statements.

In August 2018, the FASB issued ASU No. 2018-14, Changes to the Disclosure Requirements for Defined Benefit Plans. This ASU amends Subtopic 715-20, *Compensation - Retirement Benefits - Defined Benefit Plans - General*, which modifies the disclosure requirements for employers that sponsor defined benefit pension or other postretirement plans by removing and adding certain disclosures for these plans. The standard is effective for fiscal years ending after December 15, 2020, with early adoption permitted. The Company is currently evaluating the impact of this standard.

In August 2018, the FASB issued ASU No. 2018-13, Changes to the Disclosure Requirements for Fair Value Measurements. This ASU amends Topic 820, *Fair Value Measurement*, which changes the disclosure requirements for fair value measurements by removing, adding and modifying certain disclosures. The standard is effective for fiscal years beginning after December 15, 2019 and for interim periods therein, with early adoption permitted. The initial adoption of this ASU is not expected to have a material impact on the Company's consolidated financial statements.

In August 2017, the FASB issued ASU No. 2017-12, Targeted Improvement to Accounting for Hedging Activities. This ASU amends Topic 815, *Derivatives and Hedging*, which is intended to more closely align hedge accounting with companies' risk management strategies and simplify the application of hedge accounting. The guidance includes certain targeted improvements to ease the operational burden of applying hedge accounting. The ASU is effective for fiscal years beginning after December 15, 2018 and for interim periods therein with early adoption permitted. The Company will be required to apply the guidance on a cumulative-effect basis with adjustment to retained earnings as of the beginning of the fiscal year of adoption with disclosure on a prospective basis. The Company adopted this ASU on December 30, 2018 and the initial adoption of this ASU did not have a material impact on the Company's consolidated financial statements.

In January 2017, the FASB issued ASU No. 2017-04 Simplifying the Test for Goodwill Impairment. This ASU amends Topic 350, *Intangibles-Goodwill and Other*, which will simplify the goodwill impairment calculation by eliminating Step 2 from the current goodwill impairment test. Under the new guidance, an entity should perform its annual, or interim, goodwill impairment test by comparing the fair value of a reporting unit with its carrying amount. An entity should recognize an impairment charge for the amount by which the carrying amount exceeds the reporting unit's fair value; however, the loss recognized should not exceed the total amount of goodwill allocated to that reporting unit. The ASU eliminates existing guidance that requires an entity to determine goodwill impairment by calculating the implied fair value of goodwill by hypothetically assigning the fair value of a reporting unit to all of the assets and liabilities as if that reporting unit had been acquired in a business combination. This ASU is effective for fiscal years beginning after December 15, 2019 and interim periods within those fiscal years. The initial adoption of this ASU is not expected to have a material impact on the Company's consolidated financial statements.

In June 2016, the FASB issued ASU No. 2016-13, Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments. Under ASU 2016-13, existing guidance on reporting credit losses for trade and other receivables and available for sale debt securities will be replaced with a new forward-looking “expected loss” model that generally will result in the earlier recognition of allowances for losses. This ASU is effective for fiscal years beginning after December 15, 2019 and interim periods therein. The initial adoption of this ASU is not expected to have a material impact on the Company's consolidated financial statements.

In February 2016, the FASB issued ASU No. 2016-02, Leases (Topic 842). The Company adopted the new standard on December 30, 2018 using the modified retrospective approach and is using the effective date as the Company's date of initial application and consequently, financial information will not be updated and the disclosures required under the this ASU will not be provided for dates and periods before December 30, 2018. The Company has elected the package of expedients, which permits the Company not to reassess under the new standard the Company's prior conclusions about lease identification, lease classification and initial direct costs. The Company did not elect the use-of-hindsight or the practical expedient pertaining to land easements; the latter not being applicable to the Company.

FORWARD LOOKING STATEMENTS

This Annual Report on Form 10-K includes “forward-looking” statements that involve risks and uncertainties. The words such as “estimate,” “project,” “planned,” “contemplate,” “potential,” “possible,” “proposed,” “intend,” “believe,” “anticipate,” “expect,” “may,” “will,” “would,” “should,” “could,” and similar expressions are intended to identify forward-looking statements. All statements other than statements of historical facts included in this report are forward looking statements, including, without limitation, the statements under the sections entitled “Business,” “Management's Discussion and Analysis of Financial Condition and Results of Operations” and “Legal Proceedings” and located elsewhere herein regarding industry prospects, the Company's financial position and the Company's use of cash. Forward-looking statements are based on the Company's current expectations and assumptions regarding its business, the economy and other future conditions. The Company cautions readers that any such forward-looking statements it makes are not guarantees of future performance and that actual results may differ materially from anticipated results or expectations expressed in its forward-looking statements as a result of a variety of factors, including many that are beyond the Company's control.

In addition to those factors discussed under the heading “Risk Factors” in Item 1A of this report and elsewhere in this report, and in the Company's other public filings with the SEC, important factors that could cause actual results to differ materially from the Company's expectations include: existing and unknown future limitations on the ability of the Company's direct and indirect subsidiaries to make their cash flow available to the Company for payments on the Company's indebtedness or other purposes; global demands for bio-fuels and grain and oilseed commodities, which have exhibited volatility, and can impact the cost of feed for cattle, hogs and poultry, thus affecting available rendering feedstock and selling prices for the Company's products; reductions in raw material volumes available to the Company due to weak margins in the meat production industry as a result of higher feed costs, reduced consumer demand or other factors, reduced volume from food service establishments, or otherwise; reduced demand for animal feed; reduced finished product prices, including a decline in fat and used cooking oil finished product prices; changes to worldwide government policies relating to renewable fuels and GHG emissions that adversely affect programs like the U.S. government's renewable fuel standard, low carbon fuel standards ("LCFS") and tax credits for biofuels both in the United States and abroad; possible product recall resulting from developments relating to the discovery of unauthorized adulterations to food or food additives; the occurrence of 2009 H1N1 flu (initially known as Swine Flu), highly pathogenic strains of avian influenza (collectively known as Bird Flu), SARS, BSE, PED or other diseases associated with animal origin in the United States or elsewhere, such as the outbreak of ASF in China and elsewhere; escalation in the outbreak of the coronavirus; unanticipated costs and/or reductions in raw material volumes related to the Company's compliance with the existing or unforeseen new U.S. or foreign (including, without limitation, China) regulations (including new or modified animal feed, Bird Flu, SARS, PED, BSE or ASF or similar or unanticipated regulations) affecting the industries in which the Company operates or its value added products; risks associated with the DGD Joint Venture, including possible unanticipated operating disruptions and issues relating to the announced expansion project; risks and uncertainties relating to international sales and operations, including imposition of tariffs, quotas, trade barriers and other trade protections imposed by foreign countries; difficulties or a significant disruption in the Company's information systems or failure to implement new systems and software successfully, including the Company's ongoing enterprise resource planning project; risks relating to possible third party claims of intellectual property infringement; increased contributions to the Company's pension and benefit plans, including multiemployer and employer-sponsored defined benefit pension plans as required by legislation, regulation or other applicable U.S. or foreign law or resulting from a U.S. mass withdrawal event; bad debt writeoffs; loss of or failure to obtain necessary permits and registrations; continued or escalated conflict in the Middle East, North Korea, Ukraine or elsewhere; uncertainty regarding the exit of the U.K. from the European Union; and/or unfavorable export or import markets. These factors, coupled with volatile prices for natural gas and diesel fuel, climate conditions, currency exchange fluctuations, general performance of the U.S. and global economies, disturbances in world financial, credit, commodities and stock markets, and any decline in consumer confidence and discretionary spending, including the inability of consumers and companies to obtain credit due to lack of liquidity in the financial markets, among others, could cause actual results to vary materially from the forward-looking statements included in this report or negatively impact the Company's results of operations. Among other things, future profitability may be affected by the Company's ability to grow its business, which faces competition from companies that may have substantially greater resources than the Company. The Company's announced share repurchase program may be suspended or discontinued at any time and purchases of shares under the program are subject to market conditions and other factors, which are likely to change from time to time. The Company cautions readers that all forward-looking statements speak only as of the date made, and the Company undertakes no obligation to update any forward looking statements, whether as a result of changes in circumstances, new events or otherwise.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Market risks affecting the Company include exposures to changes in prices of the finished products the Company sells, interest rates on debt, availability of raw material supplies and the price of natural gas and diesel fuel used in the Company's plants. Raw materials available to the Company are impacted by seasonal factors, including holidays, when raw material volume declines; warm weather, which can adversely affect the quality of raw material processed and finished products produced; and cold weather, which can impact the collection of raw material. Predominantly all of the Company's finished products are commodities that are generally sold at prices prevailing at the time of sale. Additionally, with acquisition of foreign entities we are exposed to foreign currency exchange risks, imposition of currency controls and the possibility of currency devaluation.

The Company makes limited use of derivative instruments to manage cash flow risks related to natural gas usage, diesel fuel usage, inventory, forecasted sales and foreign currency exchange rates. The Company does not use derivative instruments for trading purposes. Natural gas swaps and options are entered into with the intent of managing the overall cost of natural gas usage by reducing the potential impact of seasonal weather demands on natural gas that increases natural gas prices. Heating oil swaps and options are entered into with the intent of managing the overall cost of diesel fuel usage by reducing the potential impact of seasonal weather demands on diesel fuel that increases diesel fuel prices. Corn options and future contracts are entered into with the intent of managing U.S. forecasted sales of BBP by reducing the impact of changing prices. Foreign currency forward contracts are entered into to mitigate the foreign exchange rate risk for transactions designated in a currency other than the local functional currency. The interest rate swaps and the natural gas swaps are subject to the requirements of FASB authoritative guidance. Some of the Company's natural gas and diesel fuel instruments are not subject to the requirements of FASB authoritative guidance because some of the natural gas and diesel fuel instruments qualify as normal purchases as defined in FASB authoritative guidance. At December 28, 2019, the Company had foreign currency option and forward contracts and corn option contracts outstanding that qualified and were designated for hedge accounting as well as corn forward contracts and foreign currency forward contracts that did not qualify and were not designated for hedge accounting.

In fiscal 2018 and fiscal 2019, the Company entered into foreign exchange options and forward contracts that are considered cash flow hedges. Under the terms of the foreign exchange contracts, the Company hedged a portion of its forecasted collagen sales in currencies other than the functional currency through the fourth quarter of fiscal 2022. At December 28, 2019, the aggregate fair value of these foreign exchange contracts was approximately $1.3 million. The December 28, 2019 amounts are included in other current assets, accrued expenses and other noncurrent liabilities on the balance sheet, with an offset recorded in accumulated other comprehensive income for the effective portion.

In fiscal 2019, the Company entered into corn option contracts that are considered cash flow hedges. Under the terms of the corn option contracts the Company hedged a portion of its forecasted sales of BBP into the second quarter of fiscal 2020. At December 28, 2019, the aggregate fair value of the corn contracts was $0.4 million. The amounts are included in other current assets on the balance sheet.

As of December 28, 2019, the Company had the following outstanding forward contracts that were entered into to hedge the future payments of intercompany notes, foreign currency transactions in currencies other than the functional currency and forecasted transactions in currencies other than the functional currency (in thousands):

Functional Currency		Contract Currency		Range of	U.S.	
Type	Amount	Type	Amount	Hedge rates	Equivalent	
Brazilian real	45,908	Euro	9,983	4.30 - 4.73	$	11,333
Brazilian real	1,106,077	U.S. dollar	308,320	3.35 - 4.30		308,320
Euro	71,203	U.S. dollar	79,664	1.10 - 1.17		79,664
Euro	26,943	Polish zloty	115,500	4.27 - 4.34		30,035
Euro	5,159	Japanese yen	624,510	119.53 - 122.68		5,751
Euro	21,074	Chinese renminbi	166,146	7.82 - 8.00		23,492
Euro	13,441	Australian dollar	21,850	1.63		14,983
Euro	6,905	British pound	5,930	0.84 - 0.90		7,698
Polish zloty	26,647	Euro	6,233	4.27 - 4.28		6,969
British pound	94	Euro	113	0.84		124
Japanese yen	204,824	U.S. dollar	1,909	104.63 - 107.92		1,909
U.S. dollar	705	Japanese yen	77,000	109.15		705
U.S. dollar	49,833	Euro	45,000	1.11		49,833
Australian dollar	432	Euro	267	1.60 - 1.64		301
					$	541,117

The above foreign currency contracts had an aggregate fair value of approximately $1.5 million and are included in other current assets, noncurrent assets and accrued expenses at December 28, 2019.

Additionally, the Company had corn forward contracts that are marked to market because they did not qualify for hedge accounting at December 28, 2019. These contracts have an aggregate fair value of approximately $0.6 million and are included in current other assets and accrued expenses at December 28, 2019.

As of December 28, 2019, the Company had forward purchase agreements in place for purchases of approximately $43.5 million of natural gas and diesel fuel commitments. As of December 28, 2019, the Company had forward purchase agreements in place for purchases of approximately $52.2 million of finished product in fiscal 2020 and years beyond.

Interest Rate Sensitivity

At December 28, 2019, the Company's fixed rate debt obligations consist of the 5.25% Notes, the 3.625% Notes and other immaterial debt that accrue interest at an annual weighted average fixed rate of approximately 4.37%. As of December 28, 2019, the Company has long-term debt of approximately $0.5 billion subject to variable interest rates under the Company's Senior Secured Credit Facilities. This portion of the Company's debt is sensitive to fluctuations in interest rates. The Company estimates that a 1% increase in interest rates will increase the Company's annual interest expense by approximately $5.1 million.

Foreign Exchange

The Company has significant international operations and is subject to certain opportunities and risks, including currency fluctuations. As a result, the Company is affected by changes in foreign currency exchange rates, particularly with respect to the euro, British pound, Canadian dollar, Australian dollar, Chinese renminbi, Brazilian real, Japanese yen.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

All other schedules are omitted since the required information is not present or is not present in amounts sufficient to require submission of the schedule, or because the information required is included in the consolidated financial statements and notes thereto.

Report of Independent Registered Public Accounting Firm

To the Stockholders and Board of Directors
Darling Ingredients Inc.:

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of Darling Ingredients Inc. and subsidiaries (the Company) as of December 28, 2019 and December 29, 2018, the related consolidated statements of operations, comprehensive income/(loss), stockholders' equity, and cash flows for each of the years in the three-year period ended December 28, 2019, and the related notes (collectively, the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 28, 2019 and December 29, 2018, and the results of its operations and its cash flows for each of the years in the three-year period ended December 28, 2019, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 28, 2019, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission, and our report dated February 25, 2020 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

Change in Accounting Principle

As discussed in Note 9 to the consolidated financial statements, the Company has changed its method of accounting for leases as of December 30, 2018, due to the adoption of Accounting Standards Update (ASU) No. 2016-02, *Leases* (Topic 842). As discussed in Note 22 to the consolidated financial statements, the Company has changed its method of accounting for revenue recognition as of December 31, 2017, due to the adoption of ASU No. 2014-09, *Revenue from Contracts with Customers* (Topic 606).

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the consolidated financial statements and (2) involved our especially challenging, subjective, or complex judgment. The communication of a critical audit matter does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Assessment of the carrying value of goodwill

As discussed in Notes 1(b) and 7 to the consolidated financial statements, the goodwill balance as of December 28, 2019 was $1,223,3 million. The Company performs the goodwill impairment testing on an annual basis at the end of fiscal month of October or more frequently if events or changes in circumstances indicate that the carrying value of goodwill might exceed the fair value of a reporting unit.

We identified the assessment of the carrying value of goodwill for Company's reporting units as a critical audit matter because of the high degree of subjectivity in evaluating the estimated fair values of the reporting units. The majority of the Company's reporting units fair values approximated their carrying value, indicating a higher risk that the goodwill may be impaired and, therefore, resulted in the application of greater auditor judgment. Specifically, the raw material volume and gross margin forecasts used to determine the fair value of the reporting unit were challenging to audit as minor changes to those assumptions had a significant effect on the Company's assessment of the carrying value of the goodwill.

The primary procedures we performed to address this critical audit matter included the following. We tested certain internal controls over the Company's goodwill impairment assessment process, including controls related to the determination of the fair value of the reporting units and the related raw material volume and gross margin assumptions. We performed sensitivity analyses over the raw material volume and gross margin assumptions to assess their impact on the Company's determination that the fair value of the reporting units exceeded its carrying value. We evaluated the primary assumptions utilized by the Company, which included the Company's forecasted raw material volume and gross margin assumptions for each reporting unit. We compared these forecasts to actual historical raw material volumes and gross margins and to available external pricing market data and Board approved capital projects. Lastly, we compared the Company's historical raw material volume and gross margin forecasts to actual results to assess the Company's ability to accurately forecast.

/s/ KPMG LLP

We have served as the Company's auditor since 1989.

Dallas, Texas
February 25, 2020

Report of Independent Registered Public Accounting Firm

To the Stockholders and Board of Directors
Darling Ingredients Inc.:

Opinion on Internal Control Over Financial Reporting

We have audited Darling Ingredients Inc. and subsidiaries' (the Company) internal control over financial reporting as of December 28, 2019, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 28, 2019, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 28, 2019 and December 29, 2018, the related consolidated statements of operations, comprehensive income/(loss), stockholders' equity, and cash flows for each of the years in the three-year period ended December 28, 2019, and the related notes (collectively, the consolidated financial statements), and our report dated February 25, 2020, expressed an unqualified opinion on those consolidated financial statements.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Annual Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ KPMG LLP

Dallas, Texas
February 25, 2020

Consolidated Balance Sheets
December 28, 2019 and December 29, 2018
(in thousands, except share and per share data)

	December 28, 2019	December 29, 2018
ASSETS		
Current assets:		
Cash and cash equivalents	$ 72,935	$ 107,262
Restricted cash	110	107
Accounts receivable, less allowance for bad debts of $8,802 at December 28, 2019 and $7,830 at December 29, 2018	406,338	385,737
Inventories	362,957	341,028
Prepaid expenses	46,599	35,247
Income taxes refundable	3,317	6,462
Other current assets	25,032	22,099
Total current assets	917,288	897,942
Property, plant and equipment, net	1,802,411	1,687,858
Intangible assets, net	526,394	595,862
Goodwill	1,223,291	1,229,159
Investment in unconsolidated subsidiaries	689,354	410,177
Operating lease right-of-use assets	124,726	—
Other assets	47,400	53,375
Deferred income taxes	14,394	14,981
	$ 5,345,258	$ 4,889,354
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Current portion of long-term debt	$ 90,996	$ 7,492
Accounts payable, principally trade	239,252	219,479
Income taxes payable	8,895	4,043
Current operating lease liabilities	37,805	—
Accrued expenses	311,391	309,484
Total current liabilities	688,339	540,498
Long-term debt, net of current portion	1,558,429	1,666,940
Long-term operating lease liabilities	91,424	—
Other noncurrent liabilities	115,785	115,032
Deferred income taxes	247,931	231,063
Total liabilities	2,701,908	2,553,533
Commitments and contingencies		
Stockholders' equity:		
Common stock, $.01 par value; 250,000,000 shares authorized, 168,620,314 and 168,098,177 shares issued at December 28, 2019 and December 29, 2018, respectively	1,686	1,681
Additional paid-in capital	1,560,897	1,536,157
Treasury stock, at cost; 4,845,203 and 3,437,579 shares at December 28, 2019 and December 29, 2018, respectively	(75,022)	(47,756)
Accumulated other comprehensive loss	(321,847)	(304,539)
Retained earnings	1,400,105	1,087,505
Total Darling's stockholders' equity	2,565,819	2,273,048
Noncontrolling interests	77,531	62,773
Total stockholders' equity	2,643,350	2,335,821
	$ 5,345,258	$ 4,889,354

The accompanying notes are an integral part of these consolidated financial statements.

DARLING INGREDIENTS INC. AND SUBSIDIARIES

Consolidated Statements of Operations
Three years ended December 28, 2019
(in thousands, except per share data)

	December 28, 2019	December 29, 2018	December 30, 2017
Net sales	$ 3,363,905	$ 3,387,726	$ 3,662,251
Costs and expenses:			
Cost of sales and operating expenses	2,589,085	2,646,374	2,875,680
Loss (gain) on sale of assets	(20,582)	709	(237)
Selling, general and administrative expenses	358,523	309,264	343,502
Restructuring and impairment charges	—	14,965	—
Depreciation and amortization	325,510	321,192	302,100
Total costs and expenses	3,252,536	3,292,504	3,521,045
Equity in net income of Diamond Green Diesel	364,452	159,779	28,239
Operating income	475,821	255,001	169,445
Other expense:			
Interest expense	(78,674)	(86,429)	(88,926)
Debt extinguishment costs	(12,126)	(23,509)	—
Foreign currency losses	(1,311)	(6,431)	(6,898)
Gain (loss) on disposal of subsidiaries	2,967	(12,545)	(885)
Other expense, net	(6,671)	(7,562)	(8,801)
Total other expense	(95,815)	(136,476)	(105,510)
Equity in net income/(loss) of other unconsolidated subsidiaries	428	(550)	265
Income from operations before income taxes	380,434	117,975	64,200
Income tax expense/(benefit)	59,467	12,031	(69,154)
Net income	320,967	105,944	133,354
Net income attributable to noncontrolling interests	(8,367)	(4,448)	(4,886)
Net income attributable to Darling	$ 312,600	$ 101,496	$ 128,468
Net income per share:			
Basic	$ 1.90	$ 0.62	$ 0.78
Diluted	$ 1.86	$ 0.60	$ 0.77

The accompanying notes are an integral part of these consolidated financial statements.

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME/(LOSS)
Three years ended December 28, 2019
(in thousands)

	December 28, 2019	December 29, 2018	December 30, 2017
Net income	$ 320,967	$ 105,944	$ 133,354
Other comprehensive income/(loss), net of tax:			
Foreign currency translation	(11,934)	(87,474)	121,810
Pension adjustments	1,535	(2,730)	5,829
Natural gas swap derivative adjustments	—	23	(18)
Corn option derivative adjustments	278	(1,687)	(1,078)
Heating oil derivative adjustments	(3,141)	—	—
Foreign exchange derivative adjustments	(3,723)	1,081	—
Total other comprehensive income/(loss), net of tax	(16,985)	(90,787)	126,543
Total comprehensive income	303,982	15,157	259,897
Comprehensive income attributable to noncontrolling interests	8,690	3,894	947
Comprehensive income attributable to Darling	$ 295,292	$ 11,263	$ 258,950

The accompanying notes are an integral part of these consolidated financial statements.

Consolidated Statements of Stockholders' Equity
Three years ended December 28, 2019
(in thousands, except share data)

	Common Stock								
	Number of Outstanding Shares	$.01 par Value	Additional Paid-In Capital	Treasury Stock	Accumulated Other Comprehensive Loss	Retained Earnings	Stockholders' equity attributable to Darling	Non-controlling Interest	Total Stockholders' Equity
Balances at December 31, 2016	164,612,558	$ 1,676	$ 1,499,431	$ (40,909)	$ (340,006)	$ 852,802	$ 1,972,994	$ 103,228	$ 2,076,222
Adjustment to initially apply FASB ASC No. 2016-09 Improvements to Employee Share-Based Payment Accounting	—	—	—	—	—	(43)	(43)	—	(43)
Net income	—	—	—	—	—	128,468	128,468	4,886	133,354
Distribution of noncontrolling interest earnings	—	—	—	—	—	—	—	(4,020)	(4,020)
Deductions to noncontrolling interests	—	—	(1,721)	—	—	—	(1,721)	(17,391)	(19,112)
Pension liability adjustments, net of tax	—	—	—	—	5,829	—	5,829	—	5,829
Natural gas swap derivative adjustment, net of tax	—	—	—	—	(18)	—	(18)	—	(18)
Corn option derivative adjustment, net of tax	—	—	—	—	(1,078)	—	(1,078)	—	(1,078)
Foreign currency translation adjustments	—	—	—	—	125,749	—	125,749	(3,939)	121,810
Stock-based compensation	—	—	14,831	—	—	—	14,831	—	14,831
Treasury stock	(210,206)	—	—	(3,154)	—	—	(3,154)	—	(3,154)
Issuance of common stock	251,085	3	3,073	—	—	—	3,076	—	3,076
Balances at December 30, 2017	164,653,437	$ 1,679	$ 1,515,614	$ (44,063)	$ (209,524)	$ 981,227	$ 2,244,933	$ 82,764	$ 2,327,697
Adjustment to initially apply FASB ASC No. 2018-02 Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income	—	—	—	—	(4,782)	4,782	—	—	—
Net income	—	—	—	—	—	101,496	101,496	4,448	105,944
Distribution of noncontrolling interest earnings	—	—	—	—	—	—	—	(9,710)	(9,710)
Deductions to noncontrolling interests	—	—	—	—	—	—	—	(14,175)	(14,175)
Pension liability adjustments, net of tax	—	—	—	—	(2,730)	—	(2,730)	—	(2,730)
Natural gas swap derivative adjustment, net of tax	—	—	—	—	23	—	23	—	23
Corn option derivative adjustment, net of tax	—	—	—	—	(1,687)	—	(1,687)	—	(1,687)
Foreign exchange derivative adjustment, net of tax	—	—	—	—	1,081	—	1,081	—	1,081
Foreign currency translation adjustments	—	—	—	—	(86,920)	—	(86,920)	(554)	(87,474)
Stock-based compensation	—	—	18,260	—	—	—	18,260	—	18,260
Treasury stock	(198,516)	—	—	(3,693)	—	—	(3,693)	—	(3,693)
Issuance of common stock	205,677	2	2,283	—	—	—	2,285	—	2,285
Balances at December 29, 2018	164,660,598	$ 1,681	$ 1,536,157	$ (47,756)	$ (304,539)	$ 1,087,505	$ 2,273,048	$ 62,773	$ 2,335,821
Net income	—	—	—	—	—	312,600	312,600	8,367	320,967
Distribution of noncontrolling interest earnings	—	—	—	—	—	—	—	(5,964)	(5,964)
Additions to noncontrolling interests	—	—	—	—	—	—	—	12,032	12,032
Pension liability adjustments, net of tax	—	—	—	—	1,535	—	1,535	—	1,535
Heating oil derivative adjustment, net of tax	—	—	—	—	(3,141)	—	(3,141)	—	(3,141)
Corn option derivative adjustment, net of tax	—	—	—	—	278	—	278	—	278
Foreign exchange derivative adjustment, net of tax	—	—	—	—	(3,723)	—	(3,723)	—	(3,723)
Foreign currency translation adjustments	—	—	—	—	(12,257)	—	(12,257)	323	(11,934)
Stock-based compensation	—	—	21,007	—	—	—	21,007	—	21,007
Treasury stock	(1,407,624)	—	—	(27,266)	—	—	(27,266)	—	(27,266)
Issuance of common stock	522,137	5	3,733	—	—	—	3,738	—	3,738
Balances at December 28, 2019	163,775,111	$ 1,686	$ 1,560,897	$ (75,022)	$ (321,847)	$ 1,400,105	$ 2,565,819	$ 77,531	$ 2,643,350

The accompanying notes are an integral part of these consolidated financial statements.

Consolidated Statements of Cash Flows
Three years ended December 28, 2019
(in thousands)

	December 28, 2019	December 29, 2018	December 30, 2017
Cash flows from operating activities:			
Net income	$ 320,967	$ 105,944	$ 133,354
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	325,510	321,192	302,100
Deferred income taxes	20,530	(16,974)	(98,805)
Loss/(gain) on sale of assets	(20,582)	709	(237)
Loss/(gain) on disposal of subsidiaries	(2,967)	12,545	885
Asset impairment	—	2,907	—
Gain on insurance proceeds from insurance settlement	(6,600)	(1,253)	(1,427)
Increase in long-term pension liability	1,831	1,463	2,383
Stock-based compensation expense	21,007	18,779	17,598
Debt extinguishment costs	12,126	23,509	—
Write-off deferred loan costs	270	320	766
Deferred loan cost amortization	5,846	7,870	8,736
Equity in net income of Diamond Green Diesel and other unconsolidated subsidiaries	(364,880)	(159,229)	(28,504)
Distributions of earnings from Diamond Green Diesel and other unconsolidated subsidiaries	69,213	67,638	26,761
Changes in operating assets and liabilities, net of effects from acquisitions:			
Accounts receivable	(26,086)	(6,347)	3,482
Income taxes refundable/payable	9,542	(9,809)	9,360
Inventories and prepaid expenses	(39,111)	2,391	(15,022)
Accounts payable and accrued expenses	32,436	14,534	73,386
Other	3,569	12,426	(24,380)
Net cash provided by operating activities	362,621	398,615	410,436
Cash flows from investing activities:			
Capital expenditures	(359,498)	(321,896)	(274,168)
Acquisitions, net of cash acquired	(1,431)	(107,727)	(12,144)
Investment in unconsolidated subsidiaries	(2,000)	(12,250)	(4,750)
Proceeds from sale of investment in subsidiaries	3,671	82,760	—
Gross proceeds from sale of property, plant and equipment and other assets	18,235	19,328	8,090
Proceeds from insurance settlement	6,600	1,253	6,054
Payments related to routes and other intangibles	(3,651)	(3,883)	(7,135)
Net cash used in investing activities	(338,074)	(342,415)	(284,053)
Cash flows from financing activities:			
Proceeds from long-term debt	517,606	624,620	33,401
Payments on long-term debt	(581,163)	(686,628)	(149,623)
Borrowings from revolving credit facility	469,227	543,898	199,495
Payments on revolving credit facility	(461,669)	(510,974)	(204,935)
Net cash overdraft financing	38,367	3,460	(714)
Deferred loan costs	(7,027)	(9,668)	(6,717)
Issuance of common stock	39	182	22
Repurchase of common stock	(19,260)	—	—
Minimum withholding taxes paid on stock awards	(4,472)	(2,215)	(3,049)
Deductions of noncontrolling interest	—	—	(17,451)
Distributions to noncontrolling interests	(6,533)	(10,257)	(5,281)
Net cash used in financing activities	(54,885)	(47,582)	(154,852)
Effect of exchange rate changes on cash flows	(3,986)	(8,165)	20,528
Net increase/(decrease) in cash, cash equivalents and restricted cash	(34,324)	453	(7,941)
Cash, cash equivalents and restricted cash at beginning of year	107,369	106,916	114,857
Cash, cash equivalents and restricted cash at end of year	$ 73,045	$ 107,369	$ 106,916
Supplemental disclosure of cash flow information:			
Accrued capital expenditures	$ 6,714	$ 5,951	$ 1,521
Cash paid during the year for:			
Interest, net of capitalized interest	$ 79,132	$ 75,006	$ 78,233
Income taxes, net of refunds	$ 29,778	$ 33,162	$ 26,304
Non-cash operating activities			
Operating lease right of use asset obtained in exchange for new lease liabilities	$ 40,596	$ —	$ —
Non-cash financing activities			
Debt issued for service contract assets	$ 25	$ 22	$ 9,459

The accompanying notes are an integral part of these consolidated financial statements.

Notes to Consolidated Financial Statements

NOTE 1. GENERAL

(a) NATURE OF OPERATIONS

Darling Ingredients Inc., a Delaware corporation ("Darling", and together with its subsidiaries, the "Company"), is a global developer and producer of sustainable natural ingredients from edible and inedible bio-nutrients, creating a wide range of ingredients and customized specialty solutions for customers in the pharmaceutical, food, pet food, feed, industrial, fuel, bioenergy and fertilizer industries. The Company's business operations is conducted through a global network of over 200 locations across five continents within three business segments, Feed Ingredients, Food Ingredients and Fuel Ingredients. Comparative segment revenues and related financial information are presented in Note 21 to the consolidated financial statements.

(b) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

(1) Basis of Presentation

The consolidated financial statements include the accounts of Darling and its consolidated subsidiaries. Noncontrolling interests represents the outstanding ownership interest in the Company's consolidated subsidiaries that are not owned by the Company. In the accompanying Consolidated Statements of Operations, the noncontrolling interest in net income of the consolidated subsidiaries is shown as an allocation of the Company's net income and is presented separately as "Net income attributable to noncontrolling interests". In the Company's Consolidated Balance Sheets, noncontrolling interests represents the ownership interests in the Company consolidated subsidiaries' net assets held by parties other than the Company. These ownership interests are presented separately as "Noncontrolling interests" within "Stockholders' Equity." All intercompany balances and transactions have been eliminated in consolidation.

(2) Fiscal Year

The Company has a 52/53 week fiscal year ending on the Saturday nearest December 31. Fiscal years for the consolidated financial statements included herein are for the 52 weeks ended December 28, 2019, the 52 weeks ended December 29, 2018, and the 52 weeks ended December 30, 2017.

(3) Cash and Cash Equivalents

The Company considers all short-term highly liquid instruments, with an original maturity of three months or less, to be cash equivalents. Cash balances are recorded net of book overdrafts when a bank right-of-offset exists. All other book overdrafts are recorded in accounts payable and the change in the related balance is reflected in operating activities on the Consolidated Statement of Cash Flows. In addition, the Company has bank overdrafts, which are considered a form of short-term financing with changes in the related balance reflected in financing activities in the Consolidated Statement of Cash Flows.

Restricted cash represents amounts required to be set aside to cover self-insurance claims and collateral for environmental claims. The following table provides a reconciliation of cash, cash equivalents and restricted cash on the consolidated balance sheet that sum to the total of the same amounts shown in the Consolidated Statements of Cash Flows (in thousands):

	December 28, 2019	December 29, 2018
Cash and cash equivalents	$ 72,935	$ 107,262
Restricted cash	110	107
Total cash, cash equivalents and restricted cash shown in the Consolidated Statements of Cash Flows	$ 73,045	$ 107,369

(4) Accounts Receivable and Allowance for Doubtful Accounts

The Company maintains allowances for doubtful accounts for estimated losses resulting from customers' non-payment of trade accounts receivable owed to the Company. These trade receivables arise in the ordinary course of business from sales of raw material, finished product or services to the Company's customers. The estimate of allowance for doubtful accounts is based upon the Company's bad debt experience, prevailing market conditions, and aging of trade accounts receivable, among other factors. If the financial condition of the Company's customers deteriorates, resulting in the customers' inability to pay the Company's receivables as they come due, additional allowances for doubtful accounts may be required. The Company has entered into agreements with third party banks to factor certain of the Company's trade receivables in order to enhance working capital by turning trade receivables into cash faster. Under these agreements, the Company will sell certain selected customers trade receivables to the third party banks without recourse for cash less a nominal fee. For the year ended December 28, 2019 and December 29, 2018, the Company sold approximately $204.1 million and $113.5 million of its trade receivables and incurred approximately $1.2 million and $0.6 million in fees, which are recorded as interest expense, respectively. For the year ended December 30, 2017, no receivables were factored.

(5) Inventories

Inventories are stated at the lower of cost or net realizable value. Cost is primarily determined using the first-in, first-out (FIFO) method for the Feed Ingredients and Fuel Ingredients segments. In the Food Ingredients segment cost is primarily determined based on the weighted average cost.

(6) Long Lived Assets

Property, Plant and Equipment

Property, plant and equipment are recorded at cost. Depreciation is computed by the straight-line method over the estimated useful lives of assets: 1) Buildings and improvements, 15 to 30 years; 2) Machinery and equipment, 3 to 10 years; 3) Vehicles, 3 to 8 years; and 4) Aircraft, 7 to 10 years.

Maintenance and repairs are charged to expense as incurred and expenditures for major renewals and improvements are capitalized.

Intangible Assets

Intangible assets with indefinite lives, and therefore, not subject to amortization, consist of trade names acquired in the acquisition of Griffin Industries Inc. on December 17, 2010 (which was subsequently converted to a limited liability company) and its subsidiaries ("Griffin") and trade names acquired in the acquisition of its Darling Ingredients International business. Intangible assets subject to amortization consist of: 1) collection routes which are made up of groups of suppliers of raw materials in similar geographic areas from which the Company derives collection fees and a dependable source of raw materials for processing into finished products; 2) permits that represent licensing of operating plants that have been acquired, giving those plants the ability to operate; 3) non-compete agreements that represent contractual arrangements with former competitors whose businesses were acquired; 4) trade names; and 5) royalty, product development, consulting, land use rights and leasehold agreements. Amortization expense is calculated using the straight-line method over the estimated useful lives of the assets ranging from: 5 to 21 years for collection routes; 10 to 20 years for permits; 3 to 7 years for non-compete covenants; and 4 to 15 years for trade names. Royalty, product development, consulting, land use rights and leasehold agreements are generally amortized over the term of the agreement.

(7) Impairment of Long-Lived Assets and Long-Lived Assets to Be Disposed of

The Company reviews the carrying value of long-lived assets for impairment when events or changes in circumstances indicate that the carrying amount of an asset, or related asset group, may not be recoverable from estimated future undiscounted cash flows. Recoverability of assets to be held and used is measured by a comparison of the carrying amount of an asset or asset group to estimated undiscounted future cash flows expected to be generated by the asset or asset group. If the carrying amount of the asset exceeds its estimated future cash flows, an impairment charge is recognized by the amount for which the carrying amount of the asset exceeds the fair value of the asset.

(8) Goodwill

The Company performed the annual goodwill and indefinite-lived intangible assets impairment assessments at October 26, 2019 and concluded that the Company's goodwill for all reporting units and all recorded indefinite-lived intangible assets were not impaired as of that date. Goodwill and indefinite lived assets are tested annually or more frequently if events or changes in circumstances indicate that the asset might be impaired. The Company follows a two-step process for testing impairment. First, the fair value of each reporting unit is compared to its carrying value to determine whether an indication of impairment exists. If impairment is indicated, then the fair value of the reporting unit's goodwill is determined by allocating the unit's fair value of its assets and liabilities (including any unrecognized intangible assets) as if the reporting unit had been acquired in a business combination. The amount of impairment for goodwill is measured as the excess of its carrying value over its implied fair value.

In fiscal 2019, 2018 and 2017, the fair values of the Company's reporting units containing goodwill exceeded the related carrying values. Goodwill was approximately $1,223.3 million and $1,229.2 million at December 28, 2019 and December 29, 2018, respectively. See Note 7 for further information on the Company's goodwill.

(9) Leases

The Company accounts for leases in accordance with Accounting Standard Codification ("ASC") Topic 842, leases. The Company determines if an arrangement is a lease at inception for which the Company recognizes the right-of-use ("ROU") asset and a lease liability at the lease commencement date. For operating leases, the lease liability is initially and subsequently measured at the present value of the unpaid lease payments at the lease commencement date. In determining the lease liability, the Company applies a discount rate to the minimum lease payments within each lease. ASC 842 requires the Company to use the rate of interest that a lessee would have to pay to borrow on a collateralized basis over a similar term an amount equal to the lease payments in a similar economic environment. To estimate the Company's incremental borrowing rate over various terms, a comparable market yield curve consistent with the Company's credit quality is determined. The lease term for all of the Company's leases include the noncancellable period of the lease plus any additional periods covered by either a Company option to extend the lease that the Company is reasonably certain to exercise or when a triggering event occurs. The Company has elected to not recognize a ROU asset and lease liability with an initial term of 12 months or less at lease commencement. Current operating leases are included on the Company's balance sheet as a ROU asset, current operating lease liabilities and long-term operating lease liabilities. For finance leases, the lease liability is initially measured in the same manner and date as for the operating leases, and is subsequently measured at amortized cost using the effective interest method. Finance leases are included in property, plant and equipment, current portion of long-term debt and long-term debt, net of current portion, but are not significant to the Company.

The ROU asset is initially measured at cost, which comprises the initial amount of the lease liability adjusted for lease payments made at or before the lease commencement date, plus any direct costs incurred less any lease incentives received. For operating leases, the ROU asset is subsequently measured throughout the lease term at the carrying amount of the lease liability, plus initial direct costs, plus (minus) any prepaid (accrued) lease payments, less the unamortized balance of the lease incentives received. Some leases payments contain rent escalation clauses (including index-based escalations), initially measured using the index at the lease commencement date. The Company recognizes minimum rental expense on a straight-line basis based on the fixed components of the lease arrangement.

The Company uses the long-lived assets impairment guidance in ASC subtopic 360-10, Property, Plant and Equipment - Overall, to determine whether the ROU asset is impaired, and if so, the amount of the impairment loss to recognize. The Company monitors for events or changes in circumstances that require a reassessment of one of its leases. When a reassessment results in the remeasurement of a lease liability, a corresponding adjustment is made to the carrying amount of the corresponding ROU asset unless doing so would reduce the carrying amount of the ROU asset to an amount less than zero. In that case, the amount of the adjustment that would result in a negative ROU asset balance is recorded in the Consolidated Statement of Operations.

As a result of adopting the new lease standard, the Company recognized additional operating liabilities of approximately $134.4 million with a corresponding ROU asset of approximately $135.7 million as of December 30, 2018.

(10) Environmental Expenditures

Environmental expenditures incurred to mitigate or prevent environmental impacts that have yet to occur and that otherwise may result from future operations are capitalized. Expenditures that relate to an existing condition caused by past operations and that do not contribute to current or future revenues are expensed or charged against established environmental reserves. Reserves are established when environmental impacts have been identified which are probable to require mitigation and/or remediation and the costs are reasonably estimable.

(11) Income Taxes

The Company accounts for income taxes using the asset and liability method. Under the asset and liability method, deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date.

The Company periodically assesses whether it is more likely than not that it will generate sufficient taxable income to realize its deferred income tax assets. In making this determination, the Company considers all available positive and negative evidence and makes certain assumptions. The Company considers, among other things, its deferred tax liabilities, the overall business environment, its historical earnings and losses, current industry trends and its outlook for taxable income in future years.

The Company recognizes tax benefits from uncertain tax positions only if it is more likely than not that the tax position will be sustained upon examination by the relevant taxing authority. Adjustments are made to the reserves for uncertain tax positions when facts and circumstances change or additional information is available. Judgment is required to assess the impact of ongoing audits conducted by tax authorities in determining the Company's consolidated income tax provision. The Company recognizes accrued interest and penalties on tax related matters as a component of income tax expense.

(12) Earnings per Share

Basic income per common share is computed by dividing net income attributable to Darling by the weighted average number of common shares including non-vested and restricted shares with participation rights outstanding during the period. Diluted income per common share is computed by dividing net income attributable to Darling by the weighted average number of common shares outstanding during the period increased by dilutive common equivalent shares determined using the treasury stock method.

Net Income per Common Share (in thousands, except per share data)

	December 28, 2019			December 29, 2018			December 30, 2017		
	Income	Shares	Per-Share	Income	Shares	Per-Share	Income	Shares	Per-Share
Basic:									
Net income attributable to Darling	$ 312,600	164,633	$ 1.90	$101,496	164,789	$ 0.62	$128,468	164,752	$ 0.78
Diluted:									
Effect of dilutive securities									
Add: Option shares in the money and dilutive effect of nonvested stock	—	5,983	—	—	5,234	—	—	3,865	—
Less: Pro-forma treasury shares	—	(2,238)	—	—	(2,113)	—	—	(1,887)	—
Diluted:									
Net income attributable to Darling	$ 312,600	168,378	$ 1.86	$101,496	167,910	$ 0.60	$128,468	166,730	$ 0.77

For fiscal 2019, 2018 and 2017, respectively, 638,146, 693,172 and 340,504 outstanding stock options were excluded from diluted income per common share as the effect was antidilutive. For fiscal 2019, 2018 and 2017, respectively, 611,187, 502,292 and 288,616 non-vested stock were excluded from diluted income per common share as the effect was antidilutive.

(13) Stock Based Compensation

The Company recognizes compensation expense ratably over the vesting period in an amount equal to the fair value of the share-based payments (e.g., stock options and non-vested and restricted stock) granted to employees and non-employee directors or by incurring liabilities to an employee or other supplier (a) in amounts based, at least in part, on the price of the entity's shares or other equity instruments, or (b) that require or may require settlement by issuing the entity's equity shares or other equity instruments. The Company's policy is to account for forfeitures in the period they occur, rather than estimating a forfeiture rate. The Company does not reclassify excess tax benefits from operating activities to financing activities in the Consolidated Statements of Cash Flows. Additionally, the Company excludes the excess tax benefits from the assumed proceeds available to repurchase shares of common stock in the computation of the Company's diluted earnings per share. The Company records tax benefit or expense within income tax expense for the year ended December 28, 2019 and December 29, 2018 related to the excess tax expense on stock options, nonvested stock, director restricted stock units and performance units. Prior to fiscal 2017, the Company recorded excess tax benefit or expense as reduction of additional paid-in capital.

Total stock-based compensation recognized in the Consolidated Statements of Operations for the years ended December 28, 2019, December 29, 2018 and December 30, 2017 was approximately $21.0 million, $18.8 million and $17.6 million, respectively, which is included in selling, general and administrative expenses, and the related income tax benefit recognized was approximately $4.3 million, $3.9 million and $3.7 million, respectively. See Note 13 for further information on the Company's stock-based compensation plans.

(14) Use of Estimates

The preparation of the consolidated financial statements in conformity with U.S. generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

If it is at least reasonably possible that the estimate of the effect on the financial statements of a condition, situation, or set of circumstances that exist at the date of the financial statements will change in the near term due to one or more future confirming events, and the effect of the change would be material to the financial statements, the Company will disclose the nature of the uncertainty and include an indication that it is at least reasonably possible that a change in the estimate will occur in the near term. If the estimate involves certain loss contingencies, the disclosure will also include an estimate of the probable loss or range of loss or state that an estimate cannot be made.

(15) Financial Instruments

The carrying amount of cash and cash equivalents, accounts receivable, accounts payable and accrued expenses approximates fair value due to the short maturity of these instruments. The Company's 5.25% Senior Notes due 2027, 3.625% Senior Notes due 2026, term loans and revolver borrowings outstanding at December 28, 2019, as described in Note 10 have a fair value based on market valuation from a third-party banks. The carrying amount for the Company's other debt is not deemed to be significantly different than the carrying value. See Note 17 for financial instruments' fair values.

(16) Derivative Instruments

The Company makes limited use of derivative instruments to manage cash flow risks related to natural gas usage, inventory, forecasted sales and foreign currency exchange rates. The Company does not use derivative instruments for trading purposes. Natural gas swaps and options are entered into with the intent of managing the overall cost of natural gas usage by reducing the potential impact of seasonal weather demands on natural gas that increases natural gas prices. Heating oil swaps and options are entered into with the intent of managing the overall cost of diesel fuel usage by reducing the potential impact of seasonal weather demands on diesel fuel that increases diesel fuel prices. Soybean meal options are entered into with the intent of managing the impact of changing prices for poultry meal sales. Corn options and future contracts are entered into with the intent of managing U.S. forecasted sales of BBP by reducing the impact of changing prices. Foreign currency forward contracts are entered into to mitigate the foreign exchange rate risk for transactions designated in a currency other than the local functional currency.

Entities are required to report all derivative instruments in the statement of financial position at fair value. The accounting for changes in the fair value (i.e., gains or losses) of a derivative instrument depends on whether it has been designated and qualifies as part of a hedging relationship and, if so, on the reason for holding the instrument. If certain conditions are met, entities may elect to designate a derivative instrument as a hedge of exposures to changes in fair value, cash flows or foreign currencies. If the hedged exposure is a cash flow exposure, the gain or loss on the derivative instrument is reported initially as a component of other comprehensive income (outside of earnings) and is subsequently reclassified into earnings when the forecasted transaction affects earnings. Any amounts excluded from the assessment of hedge effectiveness is reported in earnings immediately. If the derivative instrument is not designated as a hedge, the gain or loss is recognized in earnings in the period of change. Hedge accounting treatment ceases if or when the hedge transaction is no longer probable of occurring or the hedge relationship correlation no longer qualifies for hedge accounting.

At December 28, 2019, the Company had foreign currency option and forward contracts and corn option contracts outstanding that qualified and were designated for hedge accounting as well as corn forward contracts and foreign currency forward contracts that did not qualify and were not designated for hedge accounting.

(17) Revenue Recognition

The Company recognizes revenue on sales when control of the promised finished product is transferred to the Company's customers in an amount that reflects the consideration the Company expects to be entitled to in exchange for the finished product. Service revenues are recognized when the service occurs. Certain customers may be required to prepay prior to shipment in order to maintain payment protection against certain foreign and domestic sales. These amounts are recorded as unearned revenue and recognized when control of the promised finished product is transferred to the Company's customer. See Note 22 to the consolidated financial statements.

(18) Related Party Transactions

The Company announced in January 2011 that a wholly-owned subsidiary of Darling entered into a limited liability company agreement with a wholly-owned subsidiary of Valero Energy Corporation ("Valero") to form Diamond Green Diesel Holdings LLC (the "DGD Joint Venture"). The Company has related party sale transactions and loan transactions with the DGD Joint Venture. See Note 24 for further information on the Company's related party transactions.

(19) Foreign Currency Translation and Remeasurement

Foreign currency translation is included as a component of accumulated other comprehensive income and reflects the adjustments resulting from translating the foreign currency denominated financial statements of foreign subsidiaries into U.S. dollars. The functional currency of the Company's foreign subsidiaries is the currency of the primary economic environment in which the entity operates, which is generally the local currency of the country. Accordingly, assets and liabilities of the foreign subsidiaries are translated into U.S. dollars at fiscal year end exchange rates, including intercompany foreign currency transactions that are of long-term investment nature. Income and expense items are translated at average exchange rates occurring during the period. Changes in exchange rates that affect cash flows and the related receivables or payables are recognized as transaction gains and losses in determining net income. The Company incurred net foreign currency translation losses of approximately $12.3 million and $86.9 million in fiscal 2019 and fiscal 2018, respectively. The Company incurred net foreign currency translation gain of approximately $125.7 million in fiscal 2017.

(20) Reclassification

Certain prior year amounts have been reclassified to conform to the current year presentation including reclassification of the Company's equity in net income of Diamond Green Diesel to operating income. See Note 2 for further discussion.

(21) Subsequent Events

The Company evaluates subsequent events from the end of the most recent fiscal year through the date the consolidated financial statements are issued.

NOTE 2. INVESTMENT IN UNCONSOLIDATED SUBSIDIARIES

The Company announced on January 21, 2011 that a wholly-owned subsidiary of Darling entered into a limited liability company agreement with Valero to form the DGD Joint Venture. The DGD Joint Venture is owned 50% / 50% with Valero and was formed to design, engineer, construct and operate a renewable diesel plant (the "DGD Facility"), which as result of its recently expanded capacity is now capable of processing approximately 20,000 barrels per day of input feedstock to produce renewable diesel fuel and certain other co-products, and is located adjacent to Valero's refinery in Norco, Louisiana. The DGD Joint Venture reached mechanical completion and began the production of renewable diesel in late June 2013.

In 2019, the Company continued to evaluate operational developments and the impact of anticipated significant expansion of the DGD Joint Venture. This evaluation was impactful to the consideration of how the Company most appropriately reflects its share of equity income from the DGD Joint Venture. Based on the Company's analysis, it was determined that the DGD Joint Venture has evolved into an integral and integrated part of the Company's ongoing operations. The Company determined this justifies a more meaningful and transparent presentation of equity in net income of the DGD Joint Venture as a component of the Company's operating income. As a result, the Company has reclassified its equity in net income of the DGD Joint Venture to operating income for all periods presented.

Selected financial information for the Company's DGD Joint Venture is as follows:

(in thousands)	December 31, 2019	December 31, 2018
Assets:		
Total current assets	$ 668,026	$ 186,258
Property, plant and equipment, net	713,489	576,384
Other assets	30,710	24,601
Total assets	$ 1,412,225	$ 787,243
Liabilities and members' equity:		
Total current portion of long term debt	$ 341	$ 189
Total other current liabilities	75,802	40,619
Total long term debt	8,742	8,485
Total other long term liabilities	4,422	539
Total members' equity	1,322,918	737,411
Total liabilities and member's equity	$ 1,412,225	$ 787,243

(in thousands)	Year Ended December 31, 2019	2018	2017
Revenues:			
Operating revenues	$ 1,217,504	$ 677,663	$ 633,908
Expenses:			
Total costs and expenses less depreciation, amortization and accretion expense	438,672	329,636	547,512
Depreciation, amortization and accretion expense	50,767	29,434	28,955
Operating income	728,065	318,593	57,441
Other income	2,121	1,919	1,343
Interest and debt expense, net	(1,282)	(955)	(2,306)
Net income	$ 728,904	$ 319,557	$ 56,478

As of December 28, 2019, under the equity method of accounting, the Company has an investment in the DGD Joint Venture of approximately $661.5 million on the consolidated balance sheet and has recorded approximately $364.5

million, $159.8 million and $28.2 million in equity net income of Diamond Green Diesel for the years ended December 28, 2019, December 29, 2018 and December 30, 2017, respectively. Biodiesel blenders registered with the Internal Revenue Service were eligible for a tax incentive in the amount of $1.00 per gallon of renewable diesel blended with petroleum diesel to produce a mixture containing at least 0.1% diesel fuel. The blenders tax credit for calendar year 2019 and 2018 was approved by the U.S. Congress in December 2019. In February 2018, the blenders tax credits for calendar year 2017 were retroactively reinstated by the U.S. Congress. Fiscal 2017 results do not include any blenders tax credits, while in fiscal 2019, the DGD Joint Venture recorded approximately $274.7 million for 2019 blenders tax credits and approximately $155.9 million for 2018 blenders tax credits. In fiscal 2018, the DGD Joint Venture recorded approximately $160.4 million for the 2017 reinstated blenders tax credits. In addition, the Company received $67.5 million, $65.0 million and $25.0 million for each of the years ended December 28, 2019, December 29, 2018 and December 30, 2017, in dividend distributions from the DGD Joint Venture.

In addition to the DGD Joint Venture, the Company has investments in other unconsolidated subsidiaries that are insignificant to the Company.

NOTE 3. ACQUISITIONS AND DISPOSITIONS

In December 2019, the Company began to consolidate EnviroFlight, LLC due to a loan issued by the Company, which resulted in more control by the Company based on variable interest entity literature. In January 2020, the Company acquired the other 50% minority interest in EnviroFlight, LLC from the other joint venture partner for approximately $12.2 million, thereby increasing the Company's ownership interest in EnviroFlight, LLC to 100%.

In October 2018, the Company acquired substantially all of the assets of Triple - T Foods - Arkansas, Inc. including a wet pet food ingredient operation in Springdale, Arkansas and a cold storage operation in Rogers, Arkansas. The Company paid approximately $50.4 million in cash for assets and assumed liabilities consisting of property, plant and equipment of approximately $11.2 million, intangible assets of approximately $21.8 million, consisting of routes, permits and non-compete agreements, goodwill of approximately $8.4 million, and other including working capital of approximately $9.0 million. The Company finalized the working capital amount and paid holdback amounts in fiscal year 2019, which resulted in insignificant adjustments to previously disclosed amounts. The identifiable intangible assets have a weighted average life of 15 years.

In September 2018, the Company liquidated a consolidated joint venture that was part of the Company's international operations. The transaction resulted in the Company recording a gain of approximately $3.0 million.

In May 2018, the Company acquired substantially all of the assets of Kruger Commodities, Inc. (the "Kruger Acquisition") including protein conversion facilities in Hamilton, MI and Tama, IA, along with a protein blending operation and used cooking oil collection business in Omaha, NE. The Company paid approximately $51.3 million in cash for assets and assumed liabilities consisting of property, plant and equipment of approximately $15.2 million, intangible assets of approximately $15.9 million, consisting of routes, permits and non-compete agreements, goodwill of approximately $19.6 million, and other of approximately $0.6 million. The identifiable intangible assets have a weighted average life of 15 years.

In May 2018, the Company sold its Terra Renewal Services ("TRS") industrial residuals business to American Residuals Group, LLC. TRS is a provider of environmental services focused on the collection, hauling, and disposal of non-hazardous, liquid and semi-solid waste streams from the food processing industry. All of the used cooking oil business originally acquired as part of TRS was retained by the Company. The transaction price for the industrial residuals business sold for approximately $80.0 million in cash and resulted in the Company recording a loss on the TRS sale of approximately $15.6 million, due to a substantial portion of the original purchase price of TRS being allocated to the industrial residuals business.

In January 2018, the Company through a wholly-owned international subsidiary, sold a portion of its interest in a majority owned consolidated subsidiary for approximately $2.8 million. This transaction resulted in the foreign subsidiary being deconsolidated and accounted for using the equity method of accounting, effective January 2018. In fiscal 2017, as part of this transaction, the Company recorded $37.8 million of assets held for sale and $19.2 million of liabilities held for sale, which are included in other current assets and accrued liabilities, respectively. In addition, the Company recorded a loss of approximately $0.9 million in fiscal 2017 from this transaction.

In fiscal 2017, the Company, through a wholly-owned international subsidiary, acquired the minority interest in one of its international subsidiaries for approximately $19.1 million, including transaction costs.

Additionally, the Company made other immaterial acquisitions and disposition in fiscal 2019, fiscal 2018 and fiscal 2017.

NOTE 4. INVENTORIES

A summary of inventories follows (in thousands):

	December 28, 2019	December 29, 2018
Finished product	$ 199,799	$ 176,184
Work in process	81,841	78,501
Raw material	41,964	32,502
Supplies and other	39,353	53,841
	$ 362,957	$ 341,028

The Company's work in process inventory represents inventory in the Food Ingredients segment that is in various stages of processing.

NOTE 5. PROPERTY, PLANT AND EQUIPMENT

A summary of property, plant and equipment follows (in thousands):

	December 28, 2019	December 29, 2018
Land	$ 157,721	$ 159,981
Buildings and improvements	619,212	548,394
Machinery and equipment	2,002,237	1,757,314
Vehicles	269,529	236,465
Aircraft	9,708	18,146
Construction in process	182,392	213,653
	3,240,799	2,933,953
Accumulated depreciation	(1,438,388)	(1,246,095)
	$ 1,802,411	$ 1,687,858

NOTE 6. INTANGIBLE ASSETS

The gross carrying amount of intangible assets not subject to amortization and intangible assets subject to amortization is as follows (in thousands):

	December 28, 2019	December 29, 2018
Indefinite Lived Intangible Assets		
Trade names	$ 52,733	$ 53,472
	52,733	53,472
Finite Lived Intangible Assets:		
Routes	382,263	386,724
Permits	483,593	486,359
Non-compete agreements	3,840	3,784
Trade names	65,670	72,570
Royalty, consulting, land use rights and leasehold	20,737	16,528
	956,103	965,965
Accumulated Amortization:		
Routes	(169,050)	(145,702)
Permits	(272,213)	(238,123)
Non-compete agreements	(3,111)	(2,501)
Trade names	(32,890)	(33,242)
Royalty, consulting, land use rights and leasehold	(5,178)	(4,007)
	(482,442)	(423,575)
Total Intangible assets, less accumulated amortization	$ 526,394	$ 595,862

Gross intangible routes, permits, trade names, non-compete agreements and other intangibles partially decreased in fiscal 2019 and fiscal 2018 by approximately $13.4 million and $5.5 million, respectively as a result of asset retirements and decreased in fiscal 2019 and fiscal 2018 by approximately $0.5 million and $44.6 million from the sale of certain subsidiaries. In addition, gross intangible routes, permits, trade names, non-compete agreements and other intangibles partially increased in fiscal 2019 and fiscal 2018 due to acquired intangibles of approximately $5.7 million and $44.1 million, respectively. Amortization expense for the three years ended December 28, 2019, December 29, 2018 and December 30, 2017, was approximately $73.6 million, $75.2 million and $78.0 million, respectively. Amortization expense for the next five fiscal years is estimated to be $73.5 million, $66.3 million, $64.5 million, $63.0 million and $43.4 million.

NOTE 7. GOODWILL

Changes in the carrying amount of goodwill (in thousands):

	Feed Ingredients	Food Ingredients	Fuel Ingredients	Total
Balance at December 30, 2017				
Goodwill	$ 848,167	$ 344,471	$ 124,369	$ 1,317,007
Accumulated impairment losses	(15,914)	—	—	(15,914)
	832,253	344,471	124,369	1,301,093
Goodwill acquired during year	27,645	1,608	—	29,253
Goodwill impairment during year	—	(461)	—	(461)
Goodwill disposed of during year	(61,088)	(371)	—	(61,459)
Foreign currency translation	(22,758)	(10,007)	(6,502)	(39,267)
Balance at December 29, 2018				
Goodwill	791,966	335,701	117,867	1,245,534
Accumulated impairment losses	(15,914)	(461)	—	(16,375)
	776,052	335,240	117,867	1,229,159
Goodwill acquired during year	396	91	—	487
Goodwill disposed of during year	(636)	—	—	(636)
Foreign currency translation	1,731	(6,138)	(1,312)	(5,719)
Balance at December 28, 2019				
Goodwill	793,457	329,654	116,555	1,239,666
Accumulated impairment losses	(15,914)	(461)	—	(16,375)
	$ 777,543	$ 329,193	$ 116,555	$ 1,223,291

The process of evaluating goodwill for impairment involves the determination of the fair value of the Company's reporting units. In fiscal 2019, fiscal 2018 and fiscal 2017, the fair values of the Company's reporting units containing goodwill exceeded the related carrying value pursuant to a quantitative assessment completed as of October 26, 2019, October 27, 2018 and October 28, 2017, respectively.

NOTE 8. ACCRUED EXPENSES

Accrued expenses consist of the following (in thousands):

	December 28, 2019	December 29, 2018
Compensation and benefits	$ 107,324	$ 91,851
Utilities and sewage	18,085	20,447
Accrued ad valorem, and franchise taxes	30,231	31,366
Reserve for self insurance, litigation, environmental and tax matters (Note 20)	19,373	14,030
Medical claims liability	8,285	9,981
Accrued operating expenses	67,194	62,247
Accrued interest payable	9,879	17,536
Customer deposits	18,318	30,741
Other accrued expense	32,702	31,285
	$ 311,391	$ 309,484

NOTE 9. LEASES

In February 2016, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2016-02, Leases (Topic 842). The Company adopted the new standard on December 30, 2018 using the modified retrospective approach and is using the effective date as the Company's date of initial application and consequently, financial information will not be updated and the disclosures required under the this ASU will not be provided for dates and periods before December 30, 2018. The Company has elected the package of expedients, which permits the Company not to reassess under the new standard the Company's prior conclusions about lease identification, lease classification and initial direct costs. The Company did not elect the use-of-hindsight or the practical expedient pertaining to land easements; the latter not being applicable to the Company.

The Company leases certain real and personal property under non-cancelable operating leases. In addition, the Company leases a large portion of the Company's fleet of tractors, all of its rail cars, some IT equipment and other transportation equipment. The Company's office leases include certain lease and non-lease components, where the Company has elected to exclude the non-lease components from the calculation of the lease liability and ROU asset. The Company has finance leases, which are not significant to the Company and not separately disclosed in detail. In addition, the Company's other variable lease payments are not significant.

The components of operating lease expense included in cost of sales and operating expenses and selling, general and administrative expenses were as follows (in thousands):

	Twelve Months Ended December 28, 2019
Operating lease expense	$ 48,858
Short-term lease costs	18,163
Total lease cost	$ 67,021

Other information (in thousands, except lease terms and discount rates):

	Twelve Months Ended December 28, 2019
Cash paid for amounts included in the measurement lease liabilities	
Operating cash flows from operating leases	$ 47,691
Operating right-of-use assets, net	$ 124,726
Operating lease liabilities, current	$ 37,805
Operating lease liabilities, non-current	91,424
Total operating lease liabilities	$ 129,229
Weighted average remaining lease term - operating leases	6.46 years
Weighted average discount rate - operating leases	4.55%

Future annual minimum lease payments and capital lease commitments as of December 28, 2019 were as follows (in thousands):

Period Ending Fiscal	Operating Leases	Capital Leases
2020	$ 46,062	$ 119
2021	34,039	12
2022	23,920	11
2023	19,287	5
2024	13,230	4
Thereafter	26,088	—
	162,626	151
Less amounts representing interest	(33,397)	(6)
Lease obligations included in current and long-term liabilities	129,229	145

The Company adopted ASU 2016-02 on December 30, 2018 as noted above. The following disclosure is provided for periods prior to adoption. Future annual minimum lease payments and capital lease commitments as of December 29, 2018 were as follows (in thousands):

Period Ending Fiscal	Operating Leases	Capital Leases
2020	$ 46,316	$ 271
2021	34,403	152
2022	22,252	6
2023	13,091	6
2024	8,478	—
Thereafter	28,219	—
	$ 152,759	$ 435
Less amounts representing interest		(20)
Capital lease obligations included in current and long-term debt		$ 415

Rent expense was approximately $51.8 million and $48.7 million, for the fiscal years ended December 29, 2018 and December 30, 2017, respectively.

The Company's capital lease assets are included in property, plant and equipment and the capital lease obligations are included in the Company's current and long-term debt obligations on the consolidated balance sheet.

NOTE 10. DEBT

Debt consists of the following (in thousands):

	December 28, 2019	December 29, 2018
Amended Credit Agreement:		
Revolving Credit Facility ($32.1 million denominated in euro at December 29, 2018)	$ 39,000	$ 32,105
Term Loan A ($29.8 million denominated in CAD at December 29, 2018)	—	68,080
Less unamortized deferred loan costs	—	(381)
Carrying value Term Loan A	—	67,699
Term Loan B	495,000	495,000
Less unamortized deferred loan costs	(7,696)	(9,024)
Carrying value Term Loan B	487,304	485,976
5.25% Senior Notes due 2027 with effective interest of 5.47%	500,000	—
Less unamortized deferred loan costs	(6,494)	—
Carrying value 5.25% Senior Notes due 2027	493,506	—
5.375% Senior Notes due 2022 with effective interest of 5.72%	—	500,000
Less unamortized deferred loan costs	—	(4,876)
Carrying value 5.375% Senior Notes due 2022	—	495,124
3.625% Senior Notes due 2026 - Denominated in euro with effective interest of 3.83%	574,096	590,499
Less unamortized deferred loan costs - Denominated in euro	(6,982)	(8,160)
Carrying value 3.625% Senior Notes due 2026	567,114	582,339
Other Notes and Obligations	62,501	11,189
	1,649,425	1,674,432
Less Current Maturities	90,996	7,492
	$ 1,558,429	$ 1,666,940

As of December 28, 2019, the Company had capital lease obligations denominated in Canadian dollars included in debt. The total Canadian dollar capital lease obligation was approximately CAD$0.1 million.

As of December 28, 2019, the Company had outstanding debt under the Company's 3.625% Senior Notes due 2026 denominated in euros of €515.0 million. See below for discussion relating to the Company's debt agreements. In addition, at December 28, 2019, the Company had capital lease obligations denominated in euros included in debt. The total euro capital lease obligation was less than €0.1 million.

As of December 28, 2019, the Company had other notes and obligations that consist of various overdraft facilities of approximately $42.2 million, a China working capital line of credit of approximately $17.5 million and other debt of approximately $2.8 million.

Senior Secured Credit Facilities. On January 6, 2014, Darling, Darling International Canada Inc. ("Darling Canada") and Darling International NL Holdings B.V. ("Darling NL") entered into a Second Amended and Restated Credit Agreement (as subsequently amended, the "Amended Credit Agreement"), restating its then existing Amended and Restated Credit Agreement dated September 27, 2013, with the lenders from time to time party thereto, JPMorgan Chase Bank, N.A., as Administrative Agent, and the other agents from time to time party thereto.

Effective December 18, 2017, the Company, and certain of its subsidiaries entered into an amendment (the "Fifth Amendment") with its lenders to the Amended Credit Agreement. Among other things, the Fifth Amendment (i) refinanced the term B loans under the Amended Credit Agreement with new term B loans in an aggregate principal amount of $525.0 million with a maturity date of December 18, 2024; (ii) adjusted the applicable margin pricing on borrowings under the term B loan; (iii) modified certain of the negative covenants to increase the allowances for certain actions, including debt and investments; and (iv) made other updates and changes.

Effective December 16, 2016, the Company, and certain of its subsidiaries entered into an amendment (the "Fourth Amendment") with its lenders to the Amended Credit Agreement. Among other things, the Fourth Amendment (i) extended the maturity date of the term A loans and revolving credit facility loans under the Amended Credit Agreement from September 27, 2018 to December 16, 2021, subject to a 91-day "springing" adjustment if the term B loans are outstanding 91 days prior to the maturity date of the term B loans; (ii) reset the amortization schedule of the term A loans to their original schedule; (iii) adjusted the applicable margin pricing grid on borrowings under the term A Loan and revolving credit facility which adjusts based on the Company's total leverage ratio as set forth in the Amended Credit Agreement; (iv) eliminated the secured leverage ratio financial maintenance covenant so that from and after the effective date of the Fourth Amendment the Company's financial covenants consist of maintaining of total leverage ratio not to exceed 5.50 to 1.00 and maintaining an interest coverage ratio of not less than 3.00 to 1.00; (v) modified certain of the negative covenants to include a senior leverage ratio incurrence-based test and to increase the allowances for certain actions, including debt, investments and restricted payments; and (vi) made other updates and changes.

The Amended Credit Agreement provides for senior secured credit facilities in the aggregate principal amount of $1.88 billion comprised of (i) the Company's $350.0 million term loan A facility (ii) the Company's $525.0 million term loan B facility and (iii) the Company's $1.0 billion five-year revolving loan facility (approximately $150.0 million of which will be available for a letter of credit sub-facility and $50.0 million of which will be available for a swingline sub-facility) (collectively, the "Senior Secured Credit Facilities"). The Amended Credit Agreement also permits Darling and the other borrowers thereunder to incur ancillary facilities provided by any revolving lender party to the Senior Secured Credit Facilities (with certain restrictions). Up to $948.3 million of the revolving loan facility is available to be borrowed by (x) Darling in U.S. dollars, Canadian dollars, euros and other currencies to be agreed and available to each applicable lender, (y) Darling Canada in Canadian dollars and (z) Darling NL, Darling Ingredients International Holding B.V. ("Darling BV") and Darling Ingredients Germany Holding GmbH in U.S. dollars, Canadian dollars, euros and other currencies to be agreed and available to each applicable lender. The revolving loan facility and term loan A facility will mature on December 16, 2021. The revolving loan facility will be used for working capital needs, general corporate purposes and other purposes not prohibited by the Amended Credit Agreement.

The interest rate applicable to any borrowings under the term loan A facility and the revolving loan facility will equal either LIBOR/euro interbank offered rate/CDOR plus 2.00% per annum or base rate/Canadian prime rate plus 1.00% per annum, subject to certain step-ups or step-downs based on the Company's total leverage ratio. The interest rate applicable to any borrowings under the term loan B facility will equal the base rate plus 1.00% or LIBOR plus 2.00%.

As of December 28, 2019, the Company had $39.0 million outstanding under the revolver at base rate plus a margin of 1.00% per annum for a total of 5.75% per annum. The Company had $495.0 million outstanding under the term loan B facility at LIBOR plus a margin of 2.00% per annum for a total of 3.71% per annum. As of December 28, 2019, the Company had availability of $911.9 million under the Amended Credit Agreement taking into account amounts borrowed, ancillary facilities and letters of credit issued of $3.6 million. The Company also has foreign bank guarantees that are not part of the Company's Amended Credit Agreement in the amount of approximately $11.4 million at December 28, 2019.

The Amended Credit Agreement contains various customary representations and warranties by the Company, which include customary use of materiality, material adverse effect and knowledge qualifiers. The Amended Credit Agreement also contains (a) certain affirmative covenants that impose certain reporting and/or performance obligations on Darling and its restricted subsidiaries, (b) certain negative covenants that generally prohibit, subject to various exceptions, Darling and its restricted subsidiaries from taking certain actions, including, without limitation, incurring indebtedness, making investments, incurring liens, paying dividends and engaging in mergers and consolidations, sale and leasebacks and asset dispositions, (c) financial covenants, which include a maximum total leverage ratio and a minimum interest coverage ratio and (d) customary events of default (including a change of control) for financings of this type. Obligations under the Senior Secured Credit Facilities may be declared due and payable upon the occurrence and during the continuance of customary events of default.

3.625% Senior Notes due 2026. On May 2, 2018, Darling Global Finance B.V. (the "3.625% Issuer"), a wholly-owned subsidiary of Darling, issued and sold €515.0 million aggregate principal amount of 3.625% Senior Notes due 2026 (the "3.625% Notes"). The 3.625% Notes, which were offered in a private offering, were issued pursuant to a Senior Notes Indenture, dated as of May 2, 2018 (the "3.625% Indenture"), among Darling Global Finance B.V., Darling, the subsidiary guarantors party thereto from time to time, Citibank, N.A., London Branch, as trustee and principal paying agent, and Citigroup Global Markets Deutschland AG, as principal registrar. The gross proceeds of the offering, together with borrowings under the Company's revolving credit facility, were used to refinance all of the 4.75% Notes (as defined below) by cash tender offer and redemption of those notes and to pay any applicable premiums for the refinancing, to pay the commission of the initial purchasers of the 3.625% Notes and to pay the other fees and expenses related to the offering. The refinancing of the 4.75% Notes was completed during the second quarter of 2018.

The 3.625% Notes will mature on May 15, 2026. The 3.625% Issuer will pay interest on the 3.625% Notes on May 15 and November 15 of each year, commencing on November 15, 2018. Interest on the 3.625% Notes accrues from May 2, 2018 at a rate of 3.625% per annum and is payable in cash. The 3.625% Notes are guaranteed on a senior unsecured basis by Darling and all of Darling's restricted subsidiaries (other than any foreign subsidiary or any receivable entity) that guarantee the Senior Secured Credit Facilities (collectively, the "3.625% Guarantors"). The 3.625% Notes and the guarantees thereof are senior unsecured obligations of the 3.625% Issuer and the 3.625% Guarantors and rank equally in right of payment to all of the 3.625% Issuer's and the 3.625% Guarantors' existing and future senior unsecured indebtedness. The 3.625% Indenture contains covenants limiting Darling's ability and the ability of its restricted subsidiaries (including the 3.625% Issuer) to, among other things: incur additional indebtedness or issue preferred stock; pay dividends on or make other distributions or repurchases of Darling's capital stock or make other restricted payments; create restrictions on the payment of dividends or certain other amounts from Darling's restricted subsidiaries to Darling or Darling's other restricted subsidiaries; make loans or investments; enter into certain transactions with affiliates; create liens; designate Darling's subsidiaries as unrestricted subsidiaries; and sell certain assets or merge with or into other companies or otherwise dispose of all of substantially all of Darling's assets.

Other than for extraordinary events such as change of control and defined assets sales, the 3.625% Issuer is not required to make mandatory redemption or sinking fund payments on the 3.625% Notes. The 3.625% Notes are redeemable, in whole or in part, at any time on or after May 15, 2021 at the redemption prices specified in the 3.625% Indenture. The 3.625% Issuer may redeem some or all of the 3.625% Notes at any time prior to May 15, 2021, at a redemption price equal to 100% of the principal amount of the 3.625% Notes redeemed, plus accrued and unpaid interest to the redemption date and an Applicable Premium as specified in the 3.625% Indenture and all additional amounts (if any) then due or which will become due on the redemption date as a result of the redemption or otherwise (subject to the rights of holders on the relevant record dates to receive interest due on the relevant interest payment date and additional amounts (if any) in respect thereof).

5.25% Senior Notes due 2027. On April 3, 2019, Darling issued and sold $500.0 million aggregate principal amount of 5.25% Senior Notes due 2027 (the "5.25% Notes"). The 5.25% Notes, which were offered in a private offering, were issued pursuant to a Senior Notes Indenture, dated as of April 3, 2019 (the "5.25% Indenture"), among Darling, the subsidiary guarantors party thereto from time to time, and Regions Bank, as trustee. The gross proceeds from the sale of the Notes, together with cash on hand, were used to refinance all of the Company's 5.375% Notes (as defined below), by cash tender offer for and redemption of those notes, to pay the discount of the initial purchasers and to pay the other fees and expenses related to the offering of the 5.25% Notes. The refinancing of the 5.375% Notes was completed during the second quarter of 2019.

The 5.25% Notes will mature on April 15, 2027. Darling will pay interest on the 5.25% Notes on April 15 and October 15 of each year, commencing on October 15, 2019. Interest on the 5.25% Notes accrues from April 3, 2019 at a rate of 5.25% per annum and is payable in cash. The 5.25% Notes are guaranteed on a senior unsecured basis by Darling and all of Darling's restricted subsidiaries (other than foreign subsidiaries) that are borrowers under or that guarantee the Senior Secured Credit Facilities (collectively, the “5.25% Guarantors”). The 5.25% Notes and the guarantees thereof are senior unsecured obligations of Darling and the 5.25% Guarantors and rank equally in right of payment to all of the Darling's and the 5.25% Guarantors' existing and future senior unsecured indebtedness. The 5.25% Indenture contains covenants limiting Darling's ability and the ability of its restricted subsidiaries to, grant liens to secure indebtedness and merge with or into other companies or otherwise dispose of all or substantially all of Darling's assets. In addition, the Company capitalized $7.0 million of deferred loan costs for the issuance of the 5.25% Notes in the second quarter of 2019.

Other than for extraordinary events such as change of control and defined assets sales, Darling is not required to make mandatory redemption or sinking fund payments on the 5.25% Notes. The 5.25% Notes are redeemable, in whole or in part, at any time on or after April 15, 2022 at the redemption prices specified in the 5.25% Indenture. Darling may redeem some or all of the 5.25% Notes at any time prior to April 15, 2022, at a redemption price equal to 100% of the principal amount of the 5.25% Notes redeemed, plus accrued and unpaid interest to the redemption date and an Applicable Premium as specified in the 5.25% Indenture and all additional amounts (if any) then due or which will become due on the redemption date as a result of the redemption or otherwise (subject to the rights of holders on the relevant record dates to receive interest due on the relevant interest payment date and additional amounts (if any) in respect thereof).

4.75% Senior Notes due 2022. On June 3, 2015, Darling Global Finance B.V. issued and sold €515.0 million aggregate principal amount of the 4.75% Senior Notes due 2022 (the “4.75% Notes”). The Company retired the 4.75% Notes in the second quarter of 2018 using the proceeds from the issuance of the 3.625% Notes and incurred charges of approximately $23.5 million in debt extinguishment charges including the write-off of deferred loan costs.

5.375% Senior Notes due 2022. On January 2, 2014, Darling Escrow Corporation, a wholly-owned subsidiary of Darling, issued $500.0 million aggregate principal amount of its 5.375% Notes due 2022 (the “5.375% Notes”). The Company retired the 5.375% Notes in the second quarter of 2019 using the proceeds from the issuance of the 5.25% Notes and incurred charges of approximately $12.1 million in debt extinguishment charges including the write-off deferred loan costs.

As of December 28, 2019, the Company believes it is in compliance with all financial covenants under the Amended Credit Agreement, as well as all of the other covenants contained in the Amended Credit Agreement, the 5.25% Indenture and the 3.625% Indenture.

Maturities of long-term debt at December 28, 2019 follow (in thousands):

	Contractual Debt Payment
2020	$ 90,996
2021	10,220
2022	40
2023	1,534
2024	493,533
thereafter	1,074,274
	$ 1,670,597

NOTE 11. OTHER NONCURRENT LIABILITIES

Other noncurrent liabilities consist of the following (in thousands):

	December 28, 2019	December 29, 2018
Accrued pension liability (Note 15)	$ 55,491	$ 55,632
Reserve for self insurance, litigation, environmental and tax matters (Note 20)	54,568	57,381
Other	5,726	2,019
	$ 115,785	$ 115,032

NOTE 12. INCOME TAXES

On December 22, 2017, the Tax Cuts and Jobs Act (the "Tax Act" or "U.S. tax reform") significantly revised the U.S. corporate income tax by, among other things, lowering the statutory corporate rate from 35% to 21%, eliminating certain deductions, limiting interest expense deductions, enhancing the option for claiming accelerated depreciation deductions through 2026, imposing a mandatory one-time tax on accumulated earnings of foreign subsidiaries (also referred to as the toll charge or transition tax), and changing how foreign earnings are subject to U.S. tax. Due to the timing of the Tax Act and the substantial changes it brings, the Securities and Exchange Commission ("SEC") staff issued Staff Accounting Bulletin No. 118, *Income Tax Accounting Implications of the Tax Cuts and Jobs Act* (SAB 118), which provided registrants a measurement period to report the impact of the new U.S. tax law. During the measurement period, provisional amounts for the effects of the tax law were recorded to the extent a reasonable estimate could be made. The effects of the Tax Act on Darling include two major categories: (i) mandatory deemed repatriation, and (ii) remeasurement of deferred taxes. As described further below, we recorded a provisional net tax benefit of $75.0 million for the impact of the Tax Act in the year ended December 30, 2017. Below is a brief description of the two categories of effects from U.S. tax reform and its impact on the Company:

(i) Mandatory deemed repatriation - under the Tax Act, a company's accumulated foreign earnings are deemed to be repatriated into the U.S. The Company recorded a provisional estimate in fiscal 2017 of federal and state tax related to deemed repatriation in the amount of approximately $26.2 million. However, the Company had an existing U.S. deferred tax liability associated with foreign earnings that were not permanently reinvested outside the U.S. in the amount of $38.3 million. It is now expected that these foreign earnings can be repatriated to the U.S. without any additional U.S. tax above the amount accrued related to the mandatory deemed repatriation. Accordingly, the Company released the entire $38.3 million liability. This $38.3 million release combined with the $26.2 million amount related the mandatory deemed repatriation resulted in the Company recognizing a net provisional tax benefit of $12.1 million for this item.

(ii) Remeasurement of deferred taxes - under the Tax Act, the U.S. corporate income tax rate was reduced from 35% to 21%. Accordingly, Darling remeasured the Company's net U.S. deferred tax liability as of December 30, 2017 using the new 21% federal rate, which resulted in a provisional tax benefit in fiscal 2017 of $62.9 million. The Company has significant net operating loss carryforwards to offset the mandatory one-time repatriation; therefore, the Company reduced its deferred tax asset related to its net operating loss carryforwards rather than incurring a toll charge liability for which a cash payment would otherwise be required.

Also, in December 2017, Belgium and France enacted tax law changes resulting in a tax benefit of approximately $13.9 million. This amount is comprised of a benefit of approximately $4.4 million from the re-measurement of net deferred tax liabilities due to a reduction in the corporate tax rate in each country. Additionally, Belgium enacted a new provision increasing its participation exemption to 100%, which generally allows tax-free dividends to be received from subsidiaries resulting in a tax benefit of approximately $9.6 million.

During fiscal 2018, as information was collected, analyzed and guidance was issued by the U.S. Treasury Department, the IRS and other standard setting bodies in respect to the Tax Act, the Company made adjustments to the provisional amounts recorded in fiscal 2017. An adjustment of approximately $1.7 million of additional tax benefit was made in respect to the impact of the mandatory deemed repatriation, which reduced the effective tax rate by approximately 1.4%. The accounting for the tax effects of the Tax Act has been completed as of December 29, 2018.

In December 2018, the Netherlands enacted tax law changes resulting in a tax benefit in fiscal 2018 of approximately $8.4 million due to the re-measurement of net deferred tax liabilities as a result of a phased in reduction of the corporate income tax rate.

U.S. and foreign income from operations before income taxes are as follows (in thousands):

	December 28, 2019	December 29, 2018	December 30, 2017
United States	$ 260,867	$ 82,146	$ 179
Foreign	119,567	35,829	64,021
Income from operations before income taxes	$ 380,434	$ 117,975	$ 64,200

Income tax expense attributable to income from continuing operations before income taxes consists of the following (in thousands):

	December 28, 2019	December 29, 2018	December 30, 2017
Current:			
Federal	$ (162)	$ (330)	$ 274
State	341	(3)	(80)
Foreign	37,117	27,935	31,256
Total current	37,296	27,602	31,450
Deferred:			
Federal	13,465	4,803	(76,056)
State	11,804	(2,216)	622
Foreign	(3,098)	(18,158)	(25,170)
Total deferred	22,171	(15,571)	(100,604)
	$ 59,467	$ 12,031	$ (69,154)

Income tax expense for the years ended December 28, 2019, December 29, 2018 and December 30, 2017, differed from the amount computed by applying the statutory U.S. federal income tax rate to income from continuing operations before income taxes as a result of the following (in thousands):

	December 28, 2019	December 29, 2018	December 30, 2017
Computed "expected" tax expense	$ 79,891	$ 24,775	$ 22,470
Change in valuation allowance	38	9,700	1,609
Non-deductible compensation expenses	3,950	2,305	1,898
Deferred tax on unremitted foreign earnings	1,505	(31)	641
Sub-Part F income	1,122	3,361	6,284
Foreign rate differential	7,246	658	(8,292)
Change in uncertain tax positions	1,736	3,419	(1,080)
State income taxes, net of federal benefit	5,686	(1,813)	(1,012)
Biofuel tax incentives	(46,007)	(18,489)	—
Change in tax law			
One-time U.S. transition tax	—	(1,654)	26,243
Deferred tax effects	1,352	(8,363)	(115,169)
Other, net	2,948	(1,837)	(2,746)
	$ 59,467	$ 12,031	$ (69,154)

The tax effects of temporary differences that give rise to significant portions of the deferred tax assets and deferred tax liabilities at December 28, 2019 and December 29, 2018 are presented below (in thousands):

	December 28, 2019	December 29, 2018
Deferred tax assets:		
Loss contingency reserves	$ 11,193	$ 9,007
Employee benefits	12,236	10,791
Pension liability	13,049	12,882
Intangible assets amortization, including taxable goodwill	1,485	1,566
Interest expense carryforwards	12,361	16,871
Tax loss carryforwards	80,195	103,618
Tax credit carryforwards	5,653	5,108
Operating lease liabilities	33,549	—
Inventory	5,185	8,583
Accrued liabilities and other	13,677	12,291
Total gross deferred tax assets	188,583	180,717
Less valuation allowance	(24,759)	(27,942)
Net deferred tax assets	163,824	152,775
Deferred tax liabilities:		
Intangible assets amortization, including taxable goodwill	(157,332)	(152,841)
Property, plant and equipment depreciation	(144,911)	(164,011)
Investment in DGD Joint Venture	(54,287)	(44,857)
Operating lease assets	(32,233)	—
Tax on unremitted foreign earnings	(6,139)	(5,648)
Other	(2,459)	(1,500)
Total gross deferred tax liabilities	(397,361)	(368,857)
Net deferred tax liability	$ (233,537)	$ (216,082)
Amounts reported on Consolidated Balance Sheets:		
Non-current deferred tax asset	$ 14,394	$ 14,981
Non-current deferred tax liability	(247,931)	(231,063)
Net deferred tax liability	$ (233,537)	$ (216,082)

At December 28, 2019, the Company had net operating loss carryforwards for federal income tax purposes of approximately $106.8 million, $44.6 million of which begin to expire in 2020 through 2036 and $62.2 million of which can be carried forward indefinitely. As a result of the change in ownership which occurred pursuant to the May 2002 recapitalization, utilization of approximately $0.7 million of the federal net operating loss carryforwards is limited to approximately $0.7 million per year for the remaining life of the net operating losses. The Company had a capital loss carry forward for federal income tax purposes of approximately $21.1 million, which expires in 2023 and can only be used in future years in which the Company recognizes capital gains. The Company had interest expense carryforwards of approximately $52.4 million and $25.1 million for federal and state income tax purposes, which may be carried forward indefinitely. The Company had approximately $248.2 million of net operating loss carryforwards for state income tax purposes, $239.0 million of which expire in 2020 through 2039 and $9.2 million of which can be carried forward indefinitely. The Company had foreign net operating loss carryforwards of about $151.6 million, $68.6 million of which expire in 2020 through 2037 and $83.0 million of which can be carried forward indefinitely. Also at December 28, 2019, the Company had U.S. federal and state tax credit carryforwards of approximately $1.3 million, and tax credit carryforwards with respect to its foreign tax jurisdictions of approximately $4.3 million. As of December 28, 2019, the Company had a valuation allowance of $7.8 million due to uncertainties in respect to its ability to utilize its U.S. (federal and state) net operating loss, capital loss and tax credit carryforwards. The Company also had a valuation allowance of $16.9 million due to uncertainties in its ability to utilize foreign net operating loss carryforwards, tax credit carryforwards and other foreign deferred tax assets.

At December 28, 2019, the Company had unrecognized tax benefits of approximately $7.8 million. During fiscal 2017, the Company entered into a settlement agreement with the Darling Ingredients International business seller in which an indemnity receivable of $3.0 million was collected and the Company generally accepted responsibility for any remaining tax liabilities in pre-acquisition tax years. All of the unrecognized tax benefits would favorably impact the Company's effective tax rate if recognized. The Company believes it is reasonably possible that unrecognized tax benefits could change by $3.9 million in the next twelve months. The possible change in unrecognized tax benefits relates to the resolution of an uncertain tax position upon liquidation of certain subsidiaries. The Company recognizes accrued interest and penalties, as appropriate, related to unrecognized tax benefits as a component of income tax expense. As of December 28, 2019, interest and penalties related to unrecognized tax benefits were $0.6 million.

A reconciliation of the beginning and ending amounts of unrecognized tax benefits is as follows (in thousands):

	December 28, 2019	December 29, 2018
Balance at beginning of Year	$ 5,777	$ 2,384
Change in tax positions related to current year	3,887	237
Change in tax positions related to prior years	(233)	3,649
Change in tax positions due to settlement with tax authorities	(1,354)	—
Expiration of the Statute of Limitations	(267)	(493)
Balance at end of year	$ 7,810	$ 5,777

In fiscal 2019, the Company's major taxing jurisdictions are U.S. (federal and state), Belgium, Brazil, Canada, China, France, Germany and the Netherlands. The Company is subject to regular examination by various tax authorities. Although the final outcome of these examinations is not yet determinable, the Company does not anticipate that any of the examinations will have a significant impact on the Company's results of operations or financial position. The statute of limitations for the Company's major jurisdictions is open for varying periods, but is generally closed through the 2010 tax year.

Many of the Company's operations are conducted outside the United States. As a result of the Tax Act and the mandatory repatriation, the Company expects to have access to its offshore earnings with minimal to no additional U.S. tax impact. Therefore, the Company does not consider these earnings to be permanently reinvested offshore. As of December 28, 2019, a deferred tax liability of approximately $6.1 million has been recorded for any incremental taxes, including foreign withholding taxes, that are estimated to be incurred when those earnings are distributed to the U.S. in future years.

NOTE 13. STOCKHOLDERS' EQUITY AND STOCK-BASED COMPENSATION

On August 7, 2017, the Company's Board of Directors approved the extension for an additional two years of its previously announced share repurchase program and refreshed the amount of the program back up to its original amount of an aggregate of $100.0 million of the Company's Common Stock depending on market conditions. To that point, the Company had previously repurchased $10.9 million shares of Common stock under the program. The repurchases may be made from time to time on the open market at prevailing market prices or in negotiated transactions off the market. On November 6, 2018, the Board approved an increase in the share repurchase program from $100.0 million to $200.0 million and extended the term of the program for an additional year to August 13, 2020. During Fiscal 2019, the Company repurchased approximately $19.3 million including commissions of its common stock in the open market. Since the inception of the share repurchase program, the Company has repurchased approximately $30.1 million of its common stock in open market purchases. As of December 28, 2019, the Company has approximately $180.8 million remaining under the share repurchase program approved in August 2017.

On May 9, 2017, the shareholders approved the Company's 2017 Omnibus Incentive Plan (the “2017 Omnibus Plan”). The 2017 Omnibus Plan replaced the Company's 2012 Omnibus Incentive Plan (the “2012 Omnibus Plan”) for future grants. Under the 2017 Omnibus Plan, the Company can grant stock options, stock appreciation rights, non-vested and restricted stock (including performance stock), restricted stock units (including performance units), other stock-based awards, non-employee director awards, dividend equivalents and cash-based awards. There are up to 20,166,500 common shares available under the 2017 Omnibus Plan which may be granted to participants in any plan year (as such term is defined in the 2017 Omnibus Plan). Some of those shares are subject to outstanding awards as detailed in the tables below. To the extent these outstanding awards are forfeited or expire without exercise, the shares will be returned to and available for future grants under the 2017 Omnibus Plan. The 2017 Omnibus Plan’s purpose is to attract, retain and motivate employees, directors and third party service providers of the Company and to encourage them to have a financial interest in the Company. The 2017 Omnibus Plan is administered by the Compensation Committee (the “Committee”) of the Board of Directors. The Committee has the authority to select plan participants, grant awards, and determine the terms and conditions of such awards as provided in the 2017 Omnibus Plan. For each of fiscal 2017, fiscal 2018 and 2019, the Committee adopted an executive compensation program that includes a long-term incentive component (the "LTIP") for the Company's key employees, as a subplan under the terms of the 2017 Omnibus Plan. Pursuant to the LTIP, participants receive (i) annual, overlapping grants of performance share units ("PSUs") tied to a three-year, forward looking performance metric and (ii) annual stock options grants that vest 33.33% on the first, second and third anniversaries of grant. The principal purpose of the LTIP is to encourage the participants to enhance the value of the Company and, hence, the price of the Company's stock and the stockholders' return. In addition, the LTIP is designed to create retention incentives for the individual and to provide an opportunity for increased equity ownership by participants. See "Stock Option Awards", "Fiscal 2019 LTIP PSU Awards", "Fiscal 2018 LTIP PSU Awards" and "Fiscal 2017 LTIP PSU Awards" below for more information regarding the stock options and PSU awards under the 2019 LTIP, 2018 LTIP and 2017 LTIP. At December 28, 2019, the number of common shares available for issuance under the 2017 Omnibus Plan was 12,522,616.

At December 28, 2019, $6.9 million of total future equity-based compensation expense (determined using the Black-Scholes option pricing model and Monte Carlo model for non-vested stock grants with performance based incentives) related to outstanding non-vested options and stock awards is expected to be recognized over a weighted average period of 1.2 years.

The following is a summary of stock-based compensation awards granted during the years ended December 28, 2019, December 29, 2018 and December 30, 2017.

Stock Option Awards. Stock options to purchase Darling common shares are granted by the Committee to certain of the Company's employees as part of the Company's LTIPs under the 2017 Omnibus Plan. For the options granted under the fiscal 2019 LTIP, 2018 LTIP and 2017 LTIP, the exercise price was equal to the closing price of Darling common shares on the date of grant, which was January 25, 2019, January 29, 2018 and February 6, 2017, respectively, and such options vest 33.33% on the first, second and third anniversaries of the grant date. The Company granted 610,953 stock options under the 2019 LTIP, 637,115 stock options under the 2018 LTIP and 956,809 stock options under the 2017 LTIP.

During fiscal 2019, 2018 and 2017 only nonqualified stock options were issued and none of the options were incentive stock options. The Company's stock options granted under the LTIPs generally terminate 10 years after the date of grant.

A summary of all stock option activity as of December 28, 2019 and changes during the year ended is as follows:

	Number of shares	Weighted-avg. exercise price per share	Weighted-avg. remaining contractual life
Options outstanding at December 31, 2016	2,365,916	$ 11.65	8.4 years
Granted	956,809	12.29	
Exercised	(27,968)	8.51	
Forfeited	(4,000)	13.55	
Expired	—	—	
Options outstanding at December 30, 2017	3,290,757	11.86	7.3 years
Granted	637,115	18.82	
Exercised	(153,717)	11.49	
Forfeited	(19,953)	9.99	
Expired	—	—	
Options outstanding at December 29, 2018	3,754,202	13.07	6.9 years
Granted	610,953	21.00	
Exercised	(380,206)	9.83	
Forfeited	(6,464)	18.11	
Expired	—	—	
Options outstanding at December 28, 2019	3,978,485	$ 14.59	6.5 years
Options exercisable at December 28, 2019	2,685,252	$ 12.70	5.6 years

The fair value of each stock option grant under the LTIPs was estimated on the date of grant using the Black Scholes option-pricing model with the following weighted average assumptions and results for fiscal 2019, 2018 and 2017.

Weighted Average	2019	2018	2017
Expected dividend yield	0.0%	0.0%	0.0%
Risk-free interest rate	2.61%	2.54%	2.00%
Expected term	6.00 years	5.82 years	5.82 years
Expected volatility	29.6%	29.3%	33.4%
Fair value of options granted	$7.16	$6.37	$4.34

The expected lives for options granted during fiscal 2019, 2018 and 2017 were computed using the simplified method since the current option plans historical exercise data has not provided a reasonable basis for estimating the expected term for the current option grants.

For the year ended December 28, 2019, the amount of cash received from the exercise of options was less than $0.1 million and the related tax benefit was $0.7 million. For the year ended December 29, 2018, the amount of cash received from the exercise of options was approximately $0.2 million and the related tax benefit was approximately $0.1 million. For the year ended December 30, 2017, the amount of cash received from the exercise of options was less than $0.1 million and the related tax benefit was less than $0.1 million. The total intrinsic value of options exercised for the years ended December 28, 2019, December 29, 2018 and December 30, 2017 was approximately $4.7 million, $1.1 million and $0.2 million, respectively. The fair value of shares vested for the years ended December 28, 2019, December 29, 2018 and December 30, 2017 was approximately $15.5 million, $12.5 million and $11.3 million, respectively. At December 28, 2019, the aggregate intrinsic value of options outstanding was approximately $53.4 million and the aggregate intrinsic value of options exercisable was approximately $41.1 million.

Non-Vested Stock, Restricted Stock Unit and Performance Share Unit Awards. The Company has in the past granted non-vested stock and restricted stock unit (RSU) awards to certain of the Company's employees as part of the LTIP under the 2012 Omnibus Plan. Starting in 2016, the Committee made changes to the LTIP and instead of the non-vested stock and RSU awards, the Company began to grant performance share unit awards as part of the LTIP. In addition, the Company has granted performance share unit awards, individual non-vested stock and RSU awards to key employees from time to time at the discretion of the Committee. Non-vested stock is generally granted to U.S. based employees, while RSUs are generally granted to foreign based employees, with each RSU equivalent to one share of common stock and payable upon vesting in an equivalent number of shares of Darling common stock. For grants made under the 2017 Omnibus Plan, both non-vested stock and RSUs generally vest on the first three anniversary dates of the grant. Generally, upon termination of employment (voluntary or with cause), non-vested stock, RSUs and discretionary performance share awards that have not vested are forfeited. Upon, death, disability or qualifying retirement, a pro-rata portion of the unvested non-vested and RSU awards will vest and be payable.

A summary of the Company's non-vested stock, restricted stock unit and performance share unit awards as of December 28, 2019, and changes during the year ended is as follows:

	Non-Vested, RSU and PSU Shares	Weighted Average Grant Date Fair Value
Stock awards outstanding December 31, 2016	981,261	$ 15.56
Shares granted	104,750	12.27
Shares vested	(486,086)	13.98
Shares forfeited	(239,581)	20.90
Stock awards outstanding December 30, 2017	360,344	13.18
Shares granted	—	—
Shares vested	(228,991)	13.11
Shares forfeited	(2,779)	12.11
Stock awards outstanding December 29, 2018	128,574	13.32
Shares granted	—	—
Shares vested	(126,511)	12.13
Shares forfeited	(1,313)	14.92
Stock awards outstanding December 28, 2019	750	$ 15.50

Fiscal 2019 LTIP PSU Awards. On January 25, 2019, the Committee granted 305,195 PSUs under the Company's 2019 LTIP. The PSUs are tied to a three-year forward-looking performance period and will be earned based on the Company's average return on capital employed (ROCE), as calculated in accordance with the terms of the award agreement, relative to the average ROCE of the Company's performance peer group companies over the same performance period, with the earned award to be determined in the first quarter of fiscal 2022, after the final results for the relevant performance period are determined.

Fiscal 2018 LTIP PSU Awards. On January 29, 2018, the Committee granted 295,514 PSUs under the Company's 2018 LTIP. The PSUs are tied to a three-year forward-looking performance period and will be earned based on the Company's average return on capital employed (ROCE), as calculated in accordance with the terms of the award agreement, relative to the average ROCE of the Company's performance peer group companies over the same performance period, with the earned award to be determined in the first quarter of fiscal 2021, after the final results for the relevant performance period are determined.

Fiscal 2017 LTIP PSU Awards. On February 6, 2017, the Committee granted 559,388 PSUs under the Company's 2017 LTIP. The PSUs are tied to a three-year forward-looking performance period and will be earned based on the Company's average return on capital employed (ROCE), as calculated in accordance with the terms of the award agreement, relative to the average ROCE of the Company's performance peer group companies over the same performance period, with the earned award to be determined in the first quarter of fiscal 2020, after the final results for the relevant performance period are determined.

Under the 2019 LTIP, 2018 LTIP and 2017 LTIP, PSUs were granted at target level; however, actual awards may vary between 0% and 225% of the target number of PSUs, depending on the performance level achieved. In addition, the number of PSUs earned may be reduced (up to 30%) or increased (capped at the maximum payout) based on the Company's total shareholder return (TSR) over the performance period.

The fair value of each 2019 LTIP, 2018 LTIP and 2017 LTIP PSU award under the Company's 2019 LTIP, 2018 LTIP and 2017 LTIP was estimated on the date of grant using a Monte Carlo model with the following weighted average assumptions for fiscal 2019 , fiscal 2018 and fiscal 2017, except for the illiquidity discount, which only pertains to the 2017 LTIP PSU's with a holding period requirement.

Weighted Average	2019	2018	2017
Expected dividend yield	0.0%	0.0%	0.0%
Risk-free interest rate	2.58%	2.25%	1.40%
Expected term	2.93 years	2.93 years	2.89 years
Expected volatility	30.7%	34.4%	32.7%
Illiquidity discount	—%	—%	14.0%

A summary of the Company’s 2019, 2018 and 2017 LTIP PSU awards as of December 28, 2019, and changes during the year ended is as follows:

	LTIP PSU Shares	Weighted Average Grant Date Fair Value
LTIP PSU awards outstanding December 31, 2016	664,120	$ 7.17
Granted	559,388	11.14
Additional PSU awards vested from performance	—	—
Forfeited	(82,492)	9.99
LTIP PSU awards outstanding December 30, 2017	1,141,016	$ 8.91
Granted	295,514	20.60
Additional PSU awards vested from performance	88,151	6.95
Stock issued for PSUs	(26,212)	6.95
Forfeited	(16,493)	9.39
LTIP PSU awards outstanding December 29, 2018	1,481,976	$ 11.15
Granted	305,195	21.50
Additional PSU awards vested from performance	235,126	7.23
Stock issued for PSUs	(125,067)	7.84
Forfeited	(3,757)	19.09
LTIP PSU awards outstanding December 28, 2019	1,893,473	$ 12.54

Nonemployee Director Restricted Stock and Restricted Stock Unit Awards. On February 24, 2011, the Company's Board of Directors approved an Amended and Restated Non-Employee Director Restricted Stock Award Plan (the "Director Restricted Stock Plan") pursuant to and in accordance with the Company's 2004 Omnibus Incentive Plan (the "2004 Omnibus Plan") in order to attract and retain highly qualified persons to serve as non-employee directors and to more closely align such directors' interests with the interests of the stockholders of the Company by providing a portion of their compensation in the form of Company common stock. Under the Director Restricted Stock Plan, $60,000 in restricted Company common stock was awarded to each non-employee director on the fourth business day after the Company released its earnings for its prior completed fiscal year (the "Date of Award"). The amount of restricted stock to be issued was calculated using the closing price of the Company's common stock on the third business day after the Company released its earnings. The restricted stock was subject to a right of repurchase at $0.01 per share upon termination of the holder as a member of the Company's board of directors for cause and was not transferable. These restrictions lapse with respect to 100% of the restricted stock upon the earliest to occur of (i) 10 years after the date of award, (ii) a Change of Control (as defined in the 2004 Omnibus Plan), and (iii) termination of the non-employee director's service with the Company, other than for "cause" (as defined in the Director Restricted Stock Plan).

Beginning in fiscal 2014, the Board discontinued grants to non-employee directors under the Director Restricted Stock Plan described above, and in lieu thereof, as an additional element of annual non-employee director compensation, pursuant to the 2012 Omnibus Plan, each non-employee director received $90,000 of restricted stock units immediately following the Company's annual meeting of stockholders at which such directors are elected. Beginning in fiscal 2017, the Board increased the dollar amount of the annual grant of restricted stock units to $110,000, and such grants are now made under the 2017 Omnibus Plan. The number of restricted stock units to be issued is calculated using the closing price of the Company's stock on the date of its annual meeting. The award vests (and is no longer subject to forfeiture) on the first to occur of (i) the first anniversary of the grant date, (ii) the grantee's separation from service as a result of death or disability, or (iii) a change of control. The award will become "payable" in shares of the Company's stock in a single lump sum payment as soon as possible following a grantee's separation from service, subject to a grantee's right to elect earlier distributions under certain circumstances. If a grantee ceases to be a director for any reason other than death or disability prior to vesting, the grantee will receive a prorated amount of the award up to the date of separation.

A summary of the Company's non-employee director restricted stock awards as of December 28, 2019, and changes during the year ended is as follows:

	Restricted stock and Restricted Stock Unit Shares	Weighted Average Grant Date Fair Value
Stock awards outstanding December 31, 2016	111,359	$ 14.18
Restricted shares granted	60,575	15.63
Restricted shares where the restriction lapsed	(14,915)	12.42
Restricted shares forfeited	(2,210)	14.51
Stock awards outstanding December 30, 2017	154,809	14.91
Restricted shares granted	61,806	16.92
Restricted shares where the restriction lapsed	(1,438)	13.90
Restricted shares forfeited	—	—
Stock awards outstanding December 29, 2018	215,177	15.49
Restricted shares granted	52,990	20.76
Restricted shares where the restriction lapsed	(6,803)	2.94
Restricted shares forfeited	—	—
Stock awards outstanding December 28, 2019	261,364	$ 16.89

NOTE 14. COMPREHENSIVE INCOME/(LOSS)

The Company follows FASB authoritative guidance for reporting and presentation of comprehensive income or loss and its components. Other comprehensive income (loss) is derived from adjustments that reflect pension adjustments, natural gas swap adjustments, corn option adjustments, foreign exchange forward and option adjustments and foreign currency translation adjustments. In February 2018, the FASB issued ASU No. 2018-02, Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income. This ASU amends Topic 220, *Income Statement - Reporting Comprehensive Income*, which allowed for a reclassification from accumulated other comprehensive income to retained earnings for stranded tax effects resulting from the Tax Cuts and Jobs Act. The ASU is effective for fiscal years beginning after December 15, 2018; however, the Company elected to early adopt ASU No. 2018-02 during the quarter ended March 31, 2018. The adoption resulted in a $4.8 million reclassification from accumulated other comprehensive loss to retained earnings resulting from the Tax Cuts and Jobs Act.

In fiscal 2019, the Company's DGD Joint Venture entered into heating oil derivatives that were deemed to be cash flow hedges. As a result, the Company has accrued the other comprehensive income/(loss) portion belonging to Darling with an offset to the investment in DGD as required by FASB ASC Topic 323.

The components of other comprehensive income/(loss) and the related tax impacts for the years ended December 28, 2019, December 29, 2018 and December 30, 2017 are as follows (in thousands):

	Before-Tax Amount	Tax (Expense) or Benefit	Net-of-Tax Amount
Year Ended December 30, 2017			
Defined Benefit Pension Plans			
Actuarial (loss)/gain recognized	$ 4,027	$ (1,264)	$ 2,763
Amortization of actuarial loss	4,786	(1,801)	2,985
Amortization of prior service costs	35	(11)	24
Amortization of settlement	42	(15)	27
Other	30	—	30
Total defined benefit pension plans	8,920	(3,091)	5,829
Natural gas swap derivatives			
Gain/(loss) reclassified to net income	35	(14)	21
Gain/(loss) recognized in other comprehensive income (loss)	(65)	26	(39)
Total natural gas derivatives	(30)	12	(18)
Corn option derivatives			
Gain/(loss) reclassified to net income	(5,255)	2,039	(3,216)
Gain/(loss) recognized in other comprehensive income (loss)	3,494	(1,356)	2,138
Total corn options	(1,761)	683	(1,078)
Foreign currency translation			
Other comprehensive income	121,810	—	121,810
Other comprehensive income/(loss)	$ 128,939	$ (2,396)	$ 126,543
Year Ended December 29, 2018			
Defined Benefit Pension Plans			
Actuarial (loss)/gain recognized	$ (7,901)	$ 2,015	$ (5,886)
Amortization of actuarial loss	3,543	(910)	2,633
Actuarial prior service cost recognized	(11)	3	(8)
Amortization of prior service costs	35	(9)	26
Amortization of curtailment	498	—	498
Amortization of settlement	(3)	1	(2)
Other	9	—	9
Total defined benefit pension plans	(3,830)	1,100	(2,730)
Natural gas swap derivatives			
Gain/(loss) reclassified to net income	14	(3)	11
Gain/(loss) recognized in other comprehensive income (loss)	16	(4)	12
Total natural gas derivatives	30	(7)	23
Soybean meal option derivatives			
Gain/(loss) reclassified to net income	(8)	2	(6)
Gain/(loss) recognized in other comprehensive income (loss)	8	(2)	6
Total soybean meal derivatives	—	—	—
Corn option derivatives			
Gain/(loss) reclassified to net income	(1,912)	493	(1,419)
Gain/(Loss) recognized in other comprehensive income	(361)	93	(268)
Total corn options	(2,273)	586	(1,687)
Foreign exchange derivatives			
Gain/(Loss) recognized in other comprehensive income	1,637	(556)	1,081
Total foreign exchange derivatives	1,637	(556)	1,081
Foreign currency translation	(89,198)	1,724	(87,474)
Other comprehensive income/(loss)	$ (93,634)	$ 2,847	$ (90,787)
Year Ended December 28, 2019			
Defined Benefit Pension Plans			
Actuarial (loss)/gain recognized	$ (2,202)	$ 211	$ (1,991)

Amortization of actuarial loss	4,571	(1,143)	3,428
Actuarial prior service cost recognized	9	(2)	7
Amortization of prior service costs	34	(9)	25
Amortization of settlement	66	(16)	50
Other	16	—	16
Total defined benefit pension plans	2,494	(959)	1,535
Heating oil swap derivatives			
Gain/(loss) recognized in other comprehensive income (loss)	(4,188)	1,047	(3,141)
Total heating oil derivatives	(4,188)	1,047	(3,141)
Corn option derivatives			
Gain/(loss) reclassified to net income	422	(106)	316
Gain/(Loss) recognized in other comprehensive income	(51)	13	(38)
Total corn options	371	(93)	278
Foreign exchange derivatives			
Gain/(loss) reclassified to net income	1,345	(442)	903
Gain/(Loss) recognized in other comprehensive income	(6,887)	2,261	(4,626)
Total foreign exchange derivatives	(5,542)	1,819	(3,723)
Foreign currency translation	(12,771)	837	(11,934)
Other comprehensive income/(loss)	$ (19,636)	$ 2,651	$ (16,985)

	Fiscal Year Ended			
	December 28, 2019	December 29, 2018	December 30, 2017	Statement of Operations Classification
Derivative instruments				
Soybean meal option derivatives	$ —	$ 8	$ —	Net sales
Foreign Exchange derivatives	(1,345)	—	—	Net sales
Natural gas swap derivatives	—	(14)	(35)	Cost of sales and operating expenses
Corn option derivatives	(422)	1,912	5,255	Cost of sales and operating expenses
	(1,767)	1,906	5,220	Total before tax
	548	(492)	(2,025)	Income taxes
	(1,219)	1,414	3,195	Net of tax
Defined benefit pension plans				
Amortization of prior service cost	$ (34)	$ (35)	$ (35)	(a)
Amortization of actuarial loss	(4,571)	(3,543)	(4,786)	(a)
Amortization of curtailment	—	(498)	—	(a)
Amortization of settlement	(66)	3	(42)	(a)
	(4,671)	(4,073)	(4,863)	Total before tax
	1,168	918	1,827	Income taxes
	(3,503)	(3,155)	(3,036)	Net of tax
Total reclassifications	$ (4,722)	$ (1,741)	$ 159	Net of tax

(a) These items are included in the computation of net periodic pension cost. See Note 15 Employee Benefit Plans for additional information.

The following table presents changes in each component of accumulated comprehensive income/(loss) as of December 28, 2019 as follows (in thousands):

	Fiscal Year Ended December 28, 2019			
	Foreign Currency Translation	Derivative Instruments	Defined Benefit Pension Plans	Total
Accumulated Other Comprehensive Income/(loss) December 29, 2018, attributable to Darling, net of tax	$ (270,081)	$ 1,081	$ (35,539)	$ (304,539)
Other comprehensive loss before reclassifications	(11,934)	(7,805)	(1,968)	(21,707)
Amounts reclassified from accumulated other comprehensive income	—	1,219	3,503	4,722
Net current-period other comprehensive income/(loss)	(11,934)	(6,586)	1,535	(16,985)
Noncontrolling interest	323	—	—	323
Accumulated Other Comprehensive loss December 28, 2019, attributable to Darling, net of tax	$ (282,338)	$ (5,505)	$ (34,004)	$ (321,847)

NOTE 15. EMPLOYEE BENEFIT PLANS

The Company has retirement and pension plans covering a substantial number of its domestic and foreign employees. Most retirement benefits are provided by the Company under separate final-pay noncontributory and contributory defined benefit and defined contribution plans for all salaried and hourly employees (excluding those covered by union-sponsored plans) who meet service and age requirements. Although various defined benefit formulas exist for employees, generally these are based on length of service and earnings patterns during employment. Effective January 1, 2012, the Company's Board of Directors authorized the Company to proceed with the restructuring of its domestic retirement benefit program to include the closing of Darling's domestic salaried and hourly defined benefit plans to new participants as well as the freezing of service and wage accruals thereunder effective December 31, 2011 (a curtailment of these plans for financial reporting purposes) and the enhancing of benefits under the Company's domestic defined contribution plans. The Company-sponsored domestic hourly union plan has not been curtailed; however, several locations of the Company-sponsored domestic hourly union plan have been curtailed as a result of collective bargaining renewals for those sites.

The Company maintains defined contribution plans both domestically and at its foreign entities. The Company's matching portion and annual employer contributions to the Company's domestic defined contribution plans for fiscal 2019, 2018 and 2017 were approximately $10.6 million, $10.1 million and $9.6 million, respectively. The Company's matching portion and annual employer contributions to the Company's foreign defined contribution plans for fiscal 2019, 2018 and 2017 were approximately $8.4 million, $7.8 million and $7.5 million, respectively.

The Company recognizes the over-funded or under-funded status of the Company's defined benefit post-retirement plans as an asset or liability in the Company's balance sheet, with changes in the funded status recognized through comprehensive income in the year in which they occur. The Company uses the month-end date of December 31 as the measurement date for all of the Company's defined benefit plans, which is the closest month-end to the Company's fiscal year-end. The following table sets forth the plans' funded status for the Company's domestic and foreign defined benefit plans and amounts recognized in the Company's Consolidated Balance Sheets based on the measurement date (December 31, 2019 and December 31, 2018) (in thousands):

	December 28, 2019	December 29, 2018
Change in projected benefit obligation:		
Projected benefit obligation at beginning of period	$ 190,666	$ 204,728
Service cost	2,696	3,064
Interest cost	6,828	6,443
Employee contributions	368	410
Actuarial loss/(gain)	20,927	(12,235)
Benefits paid	(8,120)	(7,799)
Effect of curtailment	(43)	(474)
Effect of settlement	(903)	(280)
Other	(154)	(3,191)
Projected benefit obligation at end of period	212,265	190,666
Change in plan assets:		
Fair value of plan assets at beginning of period	133,861	150,517
Actual return on plan assets	26,014	(11,922)
Employer contributions	4,343	4,538
Employee contributions	368	410
Benefits paid	(8,120)	(7,799)
Effect of settlement	(903)	(331)
Other	139	(1,552)
Fair value of plan assets at end of period	155,702	133,861
Funded status	(56,563)	(56,805)
Net amount recognized	$ (56,563)	$ (56,805)
Amounts recognized in the consolidated balance sheets consist of:		
Current liability	$ (1,072)	$ (1,173)
Noncurrent liability	(55,491)	(55,632)
Net amount recognized	$ (56,563)	$ (56,805)
Amounts recognized in accumulated other comprehensive loss consist of:		
Net actuarial loss	$ 45,062	$ 47,501
Prior service cost	295	351
Net amount recognized (a)	$ 45,357	$ 47,852

(a) Amounts do not include deferred taxes of $11.4 million and $12.3 million at December 28, 2019 and December 29, 2018, respectively.

The amounts included in “Other” in the above table reflect the impact of foreign exchange translation for plans in Brazil, Belgium, Canada, France, Germany, Japan, Netherlands and United Kingdom. The Company's domestic pension plan benefits comprise approximately 73% and 74% of the projected benefit obligation for fiscal 2019 and fiscal 2018, respectively. Additionally, the Company has made required and tax deductible discretionary contributions to its domestic pension plans in fiscal 2019 and fiscal 2018 of approximately $0.9 million and $1.0 million, respectively. The Company made required and tax deductible discretionary contributions to its foreign pension plans in fiscal 2019 and fiscal 2018 of approximately $3.4 million and $ 3.5 million, respectively.

	December 28, 2019	December 29, 2018
Projected benefit obligation	$ 212,265	$ 190,666
Accumulated benefit obligation	201,708	181,642
Fair value of plan assets	155,702	133,861

The Company's service cost component of net periodic pension cost is included in compensation costs while all components of net periodic pension cost other than the service cost component are included in the line item “Other expense, net” in the Company's Consolidated Statements of Operations.

Net pension cost includes the following components (in thousands):

	December 28, 2019	December 29, 2018	December 30, 2017
Service cost	$ 2,696	$ 3,064	$ 3,043
Interest cost	6,828	6,443	6,711
Expected return on plan assets	(7,270)	(8,226)	(7,181)
Net amortization and deferral	4,605	3,578	4,821
Curtailment	(33)	(263)	—
Settlement	66	47	42
Net pension cost	$ 6,892	$ 4,643	$ 7,436

Amounts recognized in accumulated other comprehensive income (loss) for the year ended (in thousands):

	2019	2018
Actuarial (loss)/gain recognized:		
Reclassification adjustments	$ 3,428	$ 2,633
Actuarial (loss)/gain recognized during the period	(1,991)	(5,886)
Amortization of settlement	50	(2)
Amortization of curtailment	—	498
Prior service (cost) credit recognized:		
Reclassification adjustments	25	26
Prior service cost arising during the period	7	(8)
Other	16	9
	$ 1,535	$ (2,730)

The estimated amount that will be amortized from accumulated other comprehensive loss into net periodic pension cost in fiscal 2020 is as follows (in thousands):

	2020
Net actuarial loss	$ 3,417
Prior service cost	33
	$ 3,450

Weighted average assumptions used to determine benefit obligations were:

	December 28, 2019	December 29, 2018	December 30, 2017
Discount rate	2.77%	3.68%	3.40%
Rate of compensation increase	0.40%	0.42%	0.38%

Weighted average assumptions used to determine net periodic benefit cost for the employee benefit pension plans were:

	December 28, 2019	December 29, 2018	December 30, 2017
Discount rate	3.33%	2.30%	3.49%
Rate of increase in future compensation levels	0.42%	0.36%	0.43%
Expected long-term rate of return on assets	6.13%	6.13%	6.17%

Consideration was made to the long-term time horizon for the (U.S. and Canada's) plans' benefit obligations as well as the related asset class mix in determining the expected long-term rate of return. Historical returns are also considered, over the long-term time horizon, in determining the expected return. Considering the overall asset mix of approximately 60% equity and 40% fixed income with equity exposure on a declining trend since the implementation of the glide path for two of the U.S. plans, the Company believes it is reasonable to expect a long-term rate of return of 6.4% for the (U.S. and Canada's) plans' investments as a whole. The remaining foreign plans' assets are principally invested under insurance contracts arrangements which have weighted average expected long-term rate of returns of 3.3%.

The investment objectives have been established in conjunction with a comprehensive review of the current and projected financial requirements. The primary investment objectives are: 1) to have the ability to pay all benefit and expense obligations when due; 2) to maximize investment returns within reasonable and prudent levels of risk in order to minimize contributions; and 3) to maintain flexibility in determining the future level of contributions.

Investment results and changing discount rates are the most critical elements in achieving funding objectives; however, contributions are used as a supplemental source of funding as deemed appropriate.

The investment guidelines are based upon an investment horizon of greater than ten years; therefore, interim fluctuations are viewed with this perspective. The strategic asset allocation is based on this long-term perspective and the plans' funded status. However, because the participants' average age is somewhat older than the typical average plan age, consideration is given to retaining some short-term liquidity. Analysis of the cash flow projections of the plans indicates that benefit payments will continue to exceed contributions. The results of a thorough asset-liability study completed during 2012 established a dynamic asset allocation glide path (the "Glide Path") by which the U.S. plans' asset allocations are determined. The Glide Path designates intervals based on funded status which contain a corresponding allocation to equities/real assets and fixed income. As the U.S. plans' funded status improves, the allocations become more conservative, and the opposite is true when the funded status declines.

Fixed Income	35% - 80%
Equities	20% - 65%

The equity allocation is invested in stocks traded on one of the U.S. stock exchanges or in foreign companies whose stock is traded outside the U.S. and/or companies that conduct the major portion of their business outside the U.S. Securities convertible into such stocks, convertible bonds and preferred stock, may also be purchased. The portfolio may invest in American Depository Receipts ("ADR"). The majority of the equities are invested in mutual funds that are well-diversified among growth and value stocks, as well as large, mid, and small cap assets. This mix is balanced based on the understanding that large cap stocks are historically less volatile than small cap stocks: however, smaller cap stocks have historically outperformed larger cap stocks. The emerging markets portion of the equity allocation is held below 10% due to greater volatility in the asset class. Risk adjusted returns are the primary driver of allocation choices within these asset classes. The portfolio is well-diversified in terms of companies, industries and countries.

The diversified asset portion of the allocation will invest in securities with a goal to outpace inflation and preserve their value. The securities in this allocation may consist of inflation-indexed bonds, securities of real estate companies, commodity index-linked notes, fixed-income securities, securities of natural resource companies, master limited partnerships, publicly-listed infrastructure companies, and floating rate debt.

All investment objectives are expected to be achieved over a market cycle anticipated to be a period of five to seven years. Reallocations are performed on a monthly basis to retain target allocation ranges. On a quarterly basis the plans' funded status will be recalculated to determine which Glide Path interval allocation is appropriate.

The following table presents fair value measurements for the Company's defined benefit plans' assets as categorized using the fair value hierarchy under FASB authoritative guidance (in thousands):

(In thousands of dollars)	Total Fair Value	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Balances as December 29, 2018				
Fixed Income:				
Long Term	$ 21,670	$ 21,670	$ —	$ —
Short Term	2,032	2,032	—	—
Equity Securities:				
Domestic equities	37,223	37,223	—	—
International equities	24,714	24,714	—	—
Insurance contracts	9,636	—	6,299	3,337
Total categorized in fair value hierarchy	95,275	85,639	6,299	3,337
Other investments measured at NAV	38,586			
Totals	$ 133,861	$ 85,639	$ 6,299	$ 3,337
Balances as December 28, 2019				
Fixed Income:				
Long Term	$ 16,154	$ 16,154	$ —	$ —
Short Term	3,448	3,448	—	—
Equity Securities:				
Domestic equities	52,420	52,420	—	—
International equities	32,167	32,167	—	—
Insurance contracts	10,266	—	5,792	4,474
Total categorized in fair value hierarchy	114,455	104,189	5,792	4,474
Other investments measured at NAV	41,247			
Totals	$ 155,702	$ 104,189	$ 5,792	$ 4,474

The majority of the U.S. and Canada plan pension assets are invested in mutual funds; however, some assets are invested in pooled separate accounts ("PSA") which have similar mutual fund counterparts. PSA accounts are generally used to access lower fund management expenses when compared to their mutual fund counterparts. The mutual funds are generally invested in institutional shares, retirement shares, or A-shares with no loads. The fair value of each mutual fund and PSA is based on the market value of the underlying investments. The U.S. pension plans PSA for fiscal 2019 and fiscal 2018 utilized net asset value ("NAV") per share (or its equivalent) to measure its investments, as a practical expedient in accordance with ASC Topic 820, *Fair Value Measurements* and have not been classified in the fair value hierarchy in the above table. The majority of the foreign pension assets are held under insurance contracts where the investment risk for the accumulated benefit obligation rests with the insurer, which the Company has no specific detailed asset information.

The fair value measurement of plan assets using significant unobservable inputs (level 3) changed due to the following:

(in thousands of dollars)	Insurance Contracts
Balance as of December 30, 2017	$ 3,375
Unrealized gains relating to instruments still held in the reporting period.	114
Purchases, sales, and settlements	—
Exchange rate changes	(152)
Balance as of December 29, 2018	3,337
Unrealized gains relating to instruments still held in the reporting period.	1,168
Purchases, sales, and settlements	—
Exchange rate changes	(31)
Balance as of December 28, 2019	$ 4,474

Contributions

The Company's funding policy for employee benefit pension plans is to contribute annually not less than the minimum amount required nor more than the maximum amount that can be deducted for federal income tax purposes. Contributions are intended to provide not only for benefits attributed to service to date but also for those expected to be earned in the future.

Based on current actuarial estimates, the Company expects to make payments of approximately $4.8 million to meet funding requirements for its domestic and foreign pension plans in fiscal 2020.

Estimated Future Benefit Payments

The following benefit payments, which reflect expected future service, as appropriate, are expected to be paid (in thousands):

Year Ending	Pension Benefits
2020	$ 10,546
2021	10,498
2022	10,754
2023	10,675
2024	11,892
Years 2025 – 2029	64,147

Multiemployer Pension Plans

The Company participates in various multiemployer pension plans which provide defined benefits to certain employees covered by labor contracts in the United States. These plans are not administered by the Company and contributions are determined in accordance with provisions of negotiated labor contracts to meet their pension benefit obligations to their participants. The FASB issued guidance requiring companies to provide additional disclosures related to individually significant multiemployer pension plans. The Company's contributions to each individual multiemployer plan represent less than 5% of the total contributions to each such plan. Based on the most currently available information, the Company has determined that, if a withdrawal were to occur, withdrawal liabilities on two of the plans in which the Company currently participates could be material to the Company. The following table provides more detail on these significant multiemployer plans (contributions in thousands):

Pension	**EIN Pension**	**Pension Protection Act Zone Status**		**FIP/RP Status Pending/**	**Contributions**			**Expiration Date of Collective Bargaining**
Fund	**Plan Number**	**2019**	**2018**	**Implemented**	**2019**	**2018**	**2017**	**Agreement**
Western Conference of Teamsters Pension Plan	91-6145047 / 001	Green	Green	No	$ 1,514	$ 1,505	$ 1,524	December 2023 (b)
Central States, Southeast and Southwest Areas Pension Plan (a)	36-6044243 / 001	Red	Red	Yes	916	978	968	August 2022 (c)
All other multiemployer plans					1,196	1,064	980	
		Total Company Contributions			$ 3,626	$ 3,547	$ 3,472	

(a) In July 2005 this plan received a 10 year extension from the IRS for amortizing unfunded liabilities. In April 2016 the IRS approved a modification of the amortization extension.

(b) The Company has several plants that participate in the Western Conference of Teamsters Pension Plan under collective bargaining agreements that require minimum funding contributions. The agreements have expiration dates through December 31, 2023.

(c) The Company has several processing plants that participate in the Central States, Southeast and Southwest Areas Pension Plan under collective bargaining agreements that require minimum funding contributions. Certain of these agreements have expired and are being renegotiated with others having expiration dates through August 2, 2022.

With respect to the other multiemployer pension plans in which the Company participates and which are not individually significant, five plans have certified as critical or red zone, two plan have certified as endangered or yellow zone, as defined by the Pension Protection Act of 2006. The Company's portion of contributions to all plans amounted to \$3.6 million, \$3.5 million and \$3.5 million for the years ended December 28, 2019, December 29, 2018 and December 30, 2017, respectively.

The Company has received notices in prior years of withdrawal liability from five U.S. multiemployer plans in which it participated. As of December 28, 2019, the Company has an aggregate accrued liability of approximately \$6.0 million representing the present value of scheduled withdrawal liability payments under these multiemployer plans. While the Company has no ability to calculate a possible current liability for under-funded multiemployer plans that could terminate or could require additional funding under the Pension Protection Act of 2006, the amounts could be material.

NOTE 16. DERIVATIVES

The Company’s operations are exposed to market risks relating to commodity prices that affect the Company’s cost of raw materials, finished product prices and energy costs and the risk of changes in interest rates and foreign currency exchange rates.

The Company makes limited use of derivative instruments to manage cash flow risks related natural gas usage, diesel fuel usage, inventory, forecasted sales and foreign currency exchange rates. The Company does not use derivative instruments for trading purposes. Natural gas swaps and options are entered into with the intent of managing the overall cost of natural gas usage by reducing the potential impact of seasonal weather demands on natural gas that increases natural gas prices. Heating oil swaps and options are entered into with the intent of managing the overall cost of diesel fuel usage by reducing the potential impact of seasonal weather demands on diesel fuel that increases diesel fuel prices. Corn options and future contracts are entered into with the intent of managing forecasted sales of BBP by reducing the impact of changing prices. Foreign currency forward contracts are entered into to mitigate the foreign exchange rate risk for transactions designated in a currency other than the local functional currency. At December 28, 2019, the Company had foreign currency option and forward contracts and corn option contracts outstanding that qualified and were designated for hedge accounting as well as corn forward contracts and foreign currency forward contracts that did not qualify and were not designated for hedge accounting.

Entities are required to report all derivative instruments in the statement of financial position at fair value. The accounting for changes in the fair value (i.e., gains or losses) of a derivative instrument depends on whether it has been designated and qualifies as part of a hedging relationship and, if so, on the reason for holding the instrument. If certain conditions are met, entities may elect to designate a derivative instrument as a hedge of exposures to changes in fair value, cash flows or foreign currencies. If the hedged exposure is a cash flow exposure, the gain or loss on the derivative instrument is reported initially as a component of other comprehensive income (outside of earnings) and is subsequently reclassified into earnings when the forecasted transaction affects earnings. Any amounts excluded from the assessment of hedge effectiveness are reported in earnings immediately. If the derivative instrument is not designated as a hedge, the gain or loss is recognized in earnings in the period of change.

Cash Flow Hedges

In fiscal 2018 and fiscal 2019, the Company entered into foreign exchange option and forward contracts that are considered cash flow hedges. Under the terms of the foreign exchange contracts, the Company hedged a portion of its forecasted collagen sales in currencies other than the functional currency through the fourth quarter of fiscal 2022. As of December 28, 2019, the contract positions and activity are not significant to the Company. At December 28, 2019 and December 29, 2018, the aggregate fair value of these foreign exchange contracts was approximately \$1.3 million and \$1.6 million, respectively. The December 28, 2019 amounts are included in other current assets, other noncurrent assets and accrued expenses on the balance sheet, with an offset recorded in accumulated other comprehensive loss.

In fiscal 2019, the Company entered into corn option contracts that are considered cash flow hedges. Under the terms of the corn option contracts the Company hedged a portion of its forecasted sales of BBP into the second quarter of fiscal 2020. At December 28, 2019, the aggregate fair value of the corn contracts was \$0.4 million. As of December 29, 2018 there were no outstanding amounts. The amounts are included in other current assets on the balance sheet.

As of December 28, 2019, the Company had the following outstanding forward contract amounts that were entered into to hedge the future payments of intercompany note transactions, foreign currency transactions in currencies other than the functional currency and forecasted transactions in currencies other than the functional currency (in thousands):

Functional Currency		Contract Currency	
Type	**Amount**	**Type**	**Amount**
Brazilian real	45,908	Euro	9,983
Brazilian real	1,106,077	U.S. Dollar	308,320
Euro	71,203	U.S. Dollar	79,664
Euro	26,943	Polish zloty	115,500
Euro	5,159	Japanese yen	624,510
Euro	21,074	Chinese renminbi	166,146
Euro	13,441	Australian dollar	21,850
Euro	6,905	British pound	5,930
Polish zloty	26,647	Euro	6,233
British pound	94	Euro	113
Japanese yen	204,824	U.S. dollar	1,909
U.S. dollar	705	Japanese yen	77,000
U.S. dollar	49,833	Euro	45,000
Australian dollar	432	Euro	267

The Company estimates the amount that will be reclassified from accumulated other comprehensive loss at December 28, 2019 into earnings over the next 12 months will be approximately $3.1 million. As of December 28, 2019, no amounts have been reclassified into earnings as a result of the discontinuance of cash flow hedges.

The table below summarizes the effect of derivatives not designated as hedges on the Company's consolidated statements of operations for the year ended December 28, 2019, December 29, 2018 and December 30, 2017 (in thousands):

		Loss or (Gain) Recognized in Income on Derivatives Not Designated as Hedges		
		For The Year Ended		
Derivatives not designated as hedging instruments	Location	December 28, 2019	December 29, 2018	December 30, 2017
Foreign exchange	Foreign currency loss/(gain)	$ 1,565	$ (2,160)	$ 13,460
Foreign exchange	Net sales	903	2,806	—
Foreign exchange	Cost of sales and operating expenses	(452)	(1,005)	—
Foreign exchange	Selling, general and administrative expense	1,649	3,040	(2,763)
Corn options and futures	Net sales	670	683	212
Corn options and futures	Cost of sales and operating expenses	(1,636)	(543)	(1,659)
Natural gas and heating oil swaps and options	Cost of sales and operating expenses	(506)	1,031	—
Heating oil swaps and options	Net sales	—	—	492
Soybean meal	Net sales	—	—	(405)
Soybean oil	Net sales	—	—	45
Total		$ 2,193	$ 3,852	$ 9,382

At December 28, 2019, the Company had forward purchase agreements in place for purchases of approximately $43.5 million of natural gas and diesel fuel. These forward purchase agreements have no net settlement provisions and the Company intends to take physical delivery. Accordingly, the forward purchase agreements are not subject to the requirements of fair value accounting because they qualify as normal purchases as defined.

NOTE 17. FAIR VALUE MEASUREMENT

FASB authoritative guidance which defines fair value, establishes a framework for measuring fair value, and expands disclosures about fair value measurements including guidance related to nonrecurring measurements of nonfinancial assets and liabilities.

The following tables presents the Company's financial instruments that are measured at fair value on a recurring and nonrecurring basis as of December 28, 2019 and December 29, 2018 and are categorized using the fair value hierarchy under FASB authoritative guidance. The fair value hierarchy has three levels based on the reliability of the inputs used to determine the fair value.

		Fair Value Measurements at December 28, 2019 Using		
(In thousands of dollars)	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets				
Derivative assets	$ 4,140	$ —	$ 4,140	$ —
Total Assets	4,140	—	4,140	—
Liabilities				
Derivative liabilities	1,593	—	1,593	—
5.25% Senior Notes	531,850	—	531,850	—
3.625% Senior Notes	605,327	—	605,327	—
Term Loan B	497,475	—	497,475	—
Revolver	38,805	—	38,805	—
Total Liabilities	$ 1,675,050	$ —	$ 1,675,050	$ —

		Fair Value Measurements at December 29, 2018 Using		
(In thousands of dollars)	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets				
Derivative assets	$ 4,307	$ —	$ 4,307	$ —
Total Assets	4,307	—	4,307	—
Liabilities				
Derivative liabilities	3,235	—	3,235	—
5.375% Senior Notes	495,000	—	495,000	—
3.625% Senior Notes	585,303	—	585,303	—
Term Loan A	67,739	—	67,739	—
Term Loan B	492,525	—	492,525	—
Revolver	31,623	—	31,623	—
Total Liabilities	$ 1,675,425	$ —	$ 1,675,425	$ —

Derivative assets and liabilities consist of the Company's corn option and future contracts, foreign currency contracts, natural gas swap contracts and heating oil swap contracts which represent the difference between the observable market rates of commonly quoted intervals for similar assets and liabilities in active markets and the fixed swap rate considering the instrument’s term, notional amount and credit risk. See Note 16 Derivatives for discussion on the Company's derivatives.

The carrying amount of cash and cash equivalents, accounts receivable, accounts payable and accrued expenses approximates fair value due to the short maturity of these instruments and as such have been excluded from the table above. The carrying amount for the Company's other debt is not deemed to be significantly different than the fair value and all other instruments have been recorded at fair value.

The fair value of the senior notes, term loan A, term loan B and revolver debt is based on market quotation from third-party banks.

NOTE 18. ASSET IMPAIRMENT, EXIT AND RESTRUCTURING COSTS

In the second quarter of fiscal 2018, management decided to permanently shut down the Company's Hurlingham, Argentina collagen plant. As of December 29, 2018, the Company has incurred restructuring and asset impairment charges of approximately $15.0 million, which includes employee termination charges of approximately $8.4 million, asset impairment charges of approximately $2.9 million and other factory and operational restructuring charges of approximately $3.7 million.

NOTE 19. CONCENTRATION OF CREDIT RISK

Concentration of credit risk is limited due to the Company's diversified customer base and the fact that the Company sells commodities. No single customer accounted for more than 10% of the Company’s net sales in fiscal years 2019, 2018 and 2017.

NOTE 20. CONTINGENCIES

The Company is a party to various lawsuits, claims and loss contingencies arising in the ordinary course of its business, including insured worker's compensation, auto, and general liability claims, assertions by certain regulatory and governmental agencies related to permitting requirements and/or air, wastewater and storm water discharges from the Company's processing facilities, litigation involving tort, contract, statutory, labor, employment, and other claims, and tax matters.

The Company’s workers compensation, auto and general liability policies contain significant deductibles or self-insured retentions. The Company estimates and accrues its expected ultimate claim costs related to accidents occurring during each fiscal year under these insurance policies and carries this accrual as a reserve until these claims are paid by the Company.

As a result of the matters discussed above, the Company has established loss reserves for insurance, environmental, litigation and tax contingencies. At December 28, 2019 and December 29, 2018, the reserves for insurance, environmental, litigation and tax contingencies reflected on the balance sheet in accrued expenses and other non-current liabilities were approximately $70.5 million and $66.6 million, respectively. The Company has insurance recovery receivables of approximately $26.2 million and $26.1 million, as of December 28, 2019 and December 29, 2018, related to the insurance contingencies. The Company's management believes these reserves for contingencies are reasonable and sufficient based upon present governmental regulations and information currently available to management; however, there can be no assurance that final costs related to these contingencies will not exceed current estimates. The Company believes that the likelihood is remote that any additional liability from the lawsuits and claims that may not be covered by insurance would have a material effect on the Company's financial position, results of operations or cash flows.

Lower Passaic River Area. In December 2009, the Company, along with numerous other entities, received notice from the United States Environmental Protection Agency (“EPA”) that the Company (as alleged successor-in-interest to The Standard Tallow Corporation) is considered a potentially responsible party (a “PRP”) with respect to alleged contamination in the lower 17-mile area of the Passaic River which is part of the Diamond Alkali Superfund Site located in Newark, New Jersey. The Company’s designation as a PRP is based upon the operation of former plant sites located in Newark and Kearny, New Jersey by The Standard Tallow Corporation, an entity that the Company acquired in 1996. In the letter, EPA requested that the Company join a group of other parties in funding a remedial investigation and feasibility study at the site. As of the date of this report, the Company has not agreed to participate in the funding group. In March 2016, the Company received another letter from EPA notifying the Company that it had issued a Record of Decision the (“ROD”) selecting a remedy for the lower 8.3 miles of the lower Passaic River area at an estimated cost of $1.38 billion. The EPA letter makes no demand on the Company and lays out a framework for remedial design/remedial action implementation in which the EPA will first seek funding from major PRPs. The letter indicates that the EPA has sent the letter to over 100 parties, which include large chemical and refining companies, manufacturing companies, foundries, plastic companies, pharmaceutical companies and food and consumer product companies. The EPA has already offered early cash out settlements to 20 of the other PRPs and has stated that other parties who did not discharge any of the eight contaminants of concern identified in the ROD (the “COCs”) may also be eligible for cash out settlements and conducted a settlement analysis using a third-party allocator. The Company participated in this allocation process as it asserts that it is not responsible for any liabilities of its former subsidiary The Standard Tallow Corporation, which was legally dissolved in 2000, and that, in any event, The Standard Tallow Corporation did not discharge any of the COCs. In November 2019, the Company received a cash out settlement offer from the EPA in the amount of $0.6 million ($0.3 million for each of the former plant sites in question) for liabilities relating to the lower 8.3 miles of the lower Passaic River area. The Company has accepted this settlement offer, which is now subject to the EPA's administrative approval process, which includes publication and a public comment period. On September 30, 2016, Occidental Chemical Corporation ("OCC") entered into an agreement with the EPA to perform the remedial design for the cleanup plan for the lower 8.3 miles of the Passaic River. On June 30, 2018, OCC filed a complaint in the United States District Court for the District of New Jersey against over 100 companies, including the Company, seeking cost recovery or contribution for costs under the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA") relating to various investigations and cleanups OCC has conducted or is conducting in connection with the Passaic River. According to the complaint, OCC has incurred or is incurring costs which include the estimated cost to complete the remedial design for the cleanup plan for the lower 8.3 miles of the Passaic River. OCC is also seeking a declaratory judgment to hold the defendants liable for their proper shares of future response costs, including the remedial action for the lower 8.3 miles of the Passaic River. The Company, along with 40 of the other defendants, had previously received a release from OCC of its CERCLA contribution claim of $165 million associated with the costs to design the remedy for the lower 8.3 miles of the Passaic River. Furthermore, in the event the settlement with the EPA described above is consummated, it could preclude certain of the claims alleged by OCC against the Company. The Company's ultimate liability, if any, for investigatory costs, remedial costs and/or natural resource damages in connection with the lower Passaic River area cannot be determined at this time; however, as of the date of this report, the Company has found no definitive evidence that the former Standard Tallow Corporation plant sites contributed any of the COCs to the Passaic River and, therefore, there is nothing that leads the Company to believe that this matter will have a material effect on the Company's financial position, results of operations or cash flows.

NOTE 21. BUSINESS SEGMENTS

The Company sells its products domestically and internationally and operates within three industry segments: Feed Ingredients, Food Ingredients and Fuel Ingredients. The measure of segment profit (loss) includes all revenues, operating expenses (excluding certain amortization of intangibles), and selling, general and administrative expenses incurred at all operating locations and excludes general corporate expenses.

Included in corporate activities are general corporate expenses and the amortization of intangibles. Assets of corporate activities include cash, unallocated prepaid expenses, deferred tax assets, prepaid pension, and miscellaneous other assets.

Feed Ingredients

Feed Ingredients consists principally of (i) the Company's U.S. ingredients business, including the Company's fats and proteins, used cooking oil, trap grease, the Rothsay ingredients business, and the ingredients and specialty products businesses conducted by Darling Ingredients International under the Sonac name (proteins, fats, and plasma products) and (ii) the Company's bakery residuals business. Feed Ingredients operations process animal by-products and used cooking oil into fats, proteins and hides.

Food Ingredients

Food Ingredients consists principally of (i) the collagen business conducted by Darling Ingredients International under the Rousselot name, (ii) the natural casings and meat-by-products business conducted by Darling Ingredients International under the CTH name and (iii) certain specialty products businesses conducted by Darling Ingredients International under the Sonac name.

Fuel Ingredients

The Company's Fuel Ingredients segment consists of (i) the Company's investment in the DGD Joint Venture (ii) the Company's biofuel business conducted under the Dar Pro® and Rothsay names and (iii) the bioenergy business conducted by Darling Ingredients International under the Ecoson and Rendac names.

Business Segments (in thousands):

	Feed Ingredients	Food Ingredients	Fuel Ingredients	Corporate	Total
Fiscal Year Ended December 28, 2019					
Net Sales	$ 1,970,561	$ 1,119,085	$ 274,259	$ —	$ 3,363,905
Cost of sales and operating expenses	1,519,596	864,618	204,871	—	2,589,085
Gross Margin	450,965	254,467	69,388	—	774,820
Loss (gain) on sale of assets	(7,720)	(13,175)	313	—	(20,582)
Selling, general and administrative expense	200,487	97,363	2,762	57,911	358,523
Depreciation and amortization	203,456	79,671	31,946	10,437	325,510
Equity in net income of Diamond Green Diesel	—	—	364,452	—	364,452
Segment operating income/(loss)	54,742	90,608	398,819	(68,348)	475,821
Equity in net income of other unconsolidated subsidiaries	428	—	—	—	428
Segment income/(loss)	55,170	90,608	398,819	(68,348)	476,249
Total other expense					(95,815)
Income before income taxes					$ 380,434
Segment assets at December 28, 2019	$ 2,653,363	$ 1,345,526	$ 1,087,701	$ 258,668	$ 5,345,258

	Feed Ingredients	Food Ingredients	Fuel Ingredients	Corporate	Total
Fiscal Year Ended December 29, 2018					
Net Sales	$ 1,952,555	$ 1,139,126	$ 296,045	$ —	$ 3,387,726
Cost of sales and operating expenses	1,497,973	918,141	230,260	—	2,646,374
Gross Margin	454,582	220,985	65,785	—	741,352
Loss/(gain) on sale of assets	725	(282)	266	—	709
Selling, general and administrative expense	176,722	91,546	(4,770)	45,766	309,264
Restructuring and impairment charges	—	14,965	—	—	14,965
Depreciation and amortization	194,292	80,988	34,981	10,931	321,192
Equity in net income of Diamond Green Diesel	—	—	159,779	—	159,779
Segment operating income/(loss)	82,843	33,768	195,087	(56,697)	255,001
Equity in net loss of unconsolidated subsidiaries	(550)	—	—	—	(550)
Segment income/(loss)	82,293	33,768	195,087	(56,697)	254,451
Total other expense					(136,476)
Income before income taxes					$ 117,975
Segment assets at December 29, 2018	$ 2,566,106	$ 1,401,291	$ 761,817	$ 160,140	$ 4,889,354

	Feed Ingredients	Food Ingredients	Fuel Ingredients	Corporate	Total
Fiscal Year Ended December 30, 2017					
Net Sales	$ 2,239,492	$ 1,156,976	$ 265,783	$ —	$ 3,662,251
Cost of sales and operating expenses	1,744,990	920,165	210,525	—	2,875,680
Gross Margin	494,502	236,811	55,258	—	786,571
Loss/(gain) on sale of assets	(358)	218	(97)	—	(237)
Selling, general and administrative expense	178,347	104,644	10,355	50,156	343,502
Depreciation and amortization	184,172	75,010	31,019	11,899	302,100
Equity in net income of Diamond Green Diesel	—	—	28,239	—	28,239
Segment operating income/(loss)	132,341	56,939	42,220	(62,055)	169,445
Equity in net income of unconsolidated subsidiaries	265	—	—	—	265
Segment income/(loss)	132,606	56,939	42,220	(62,055)	169,710
Total other expense					(105,510)
Income before income taxes					$ 64,200

Business Segment Property, Plant and Equipment (in thousands):

	December 28, 2019	December 29, 2018	December 30, 2017
Depreciation and amortization:			
Feed Ingredients	$ 203,456	$ 194,292	$ 184,172
Food Ingredients	79,671	80,988	75,010
Fuel Ingredients	31,946	34,981	31,019
Corporate Activities	10,437	10,931	11,899
Total	$ 325,510	$ 321,192	$ 302,100
Capital expenditures:			
Feed Ingredients	$ 229,415	$ 237,215	$ 191,953
Food Ingredients	85,501	51,659	50,099
Fuel Ingredients	23,964	27,121	24,707
Corporate Activities	20,618	5,901	7,409
Total (a)	$ 359,498	$ 321,896	$ 274,168

(a) Excludes capital assets acquired by acquisition in fiscal 2018 of approximately $31.6 million and excludes immaterial capital assets acquired by acquisition in fiscal 2017.

Long-lived assets related to the Company's operations in North America, Europe, China, South American and other were as follows (in thousands):

	FY 2019	FY 2018
	Long-Lived Assets	Long-Lived Assets
North America	$ 2,991,537	$ 2,562,389
Europe	1,228,807	1,219,084
China	124,874	136,711
South America	73,477	64,916
Other	9,275	8,312
Total	$ 4,427,970	$ 3,991,412

NOTE 22. REVENUE

On December 31, 2017, the Company adopted ASU No. 2014-09, Revenue from Contracts with Customers ("Topic 606"), using the modified retrospective basis. Results for reporting periods beginning December 31, 2017 are presented under Topic 606, while prior periods are not adjusted and continue to be reported in accordance with the Company's historic accounting under Revenue Recognition (Topic 605). The adoption did not change the timing of revenue recognition as the Company's revenues have been determined to be recognized at a point in time and not over time. The Company elected not to capitalize contract fulfillment costs as the recovery of such costs are for a period of less than one year's time and are not material to the Company. At December 28, 2019, there were no contract assets recorded on the Consolidated Balance sheets. Also, the Company elected to treat shipping and handling as fulfillment costs under Topic 606, which will result in billed freight recorded in cost of sales and netted against freight costs. Sales, value-add, and other taxes collected concurrently with revenue-producing activities are excluded from revenue and booked on a net basis.

The Company extends payment terms to its customers based on commercially acceptable practices. The term between invoicing and payment due date is not significant. Revenue is measured as the amount of consideration the Company expects to receive in exchange for transferring finished products or performing services, which is generally based on executed agreement or purchase order.

Most of the Company's products are shipped based on the customer specifications. Customer returns are infrequent and not material to the Company. Adjustments to net sales for sales deductions are generally recognized in the same period as the sale or when known. Customers in certain industries or countries may be required to prepay prior to shipment in order to maintain payment protection. These represent short-term prepayment from customers and are not material to the Company.

The following table summarizes the impact of adopting Topic 606 on the Company's consolidated financial statements for the year ended December 28, 2019 (in thousands):

	Impact of changes in accounting policies		
	As reported	Adjustments	Balances without adoption of Topic 606
Year Ended December 28, 2019			
Net sales	$ 3,363,905	184,835	3,548,740
Cost of sale and operating expenses	$ 2,589,085	184,835	2,773,920
Year Ended December 29, 2018			
Net sales	$ 3,387,726	177,726	$ 3,565,452
Cost of sales and operating expenses	$ 2,646,374	177,726	$ 2,824,100

The following tables presents the Company revenues disaggregated by geographic area and major product types by reportable segment for the years ended December 28, 2019, December 29, 2018 and December 30, 2017 (in thousands):

	Year Ended December 28, 2019			
	Feed Ingredients	Food Ingredients	Fuel Ingredients	Total
Geographic Area				
North America	$ 1,635,382	$ 214,623	$ 39,568	$ 1,889,573
Europe	309,097	609,999	234,691	1,153,787
China	16,342	178,283	—	194,625
South America	—	51,168	—	51,168
Other	9,740	65,012	—	74,752
Net sales	$ 1,970,561	$ 1,119,085	$ 274,259	$ 3,363,905
Major product types				
Fats	$ 584,336	$ 133,898	$ —	$ 718,234
Used cooking oil	185,705	—	—	185,705
Proteins	791,284	—	—	791,284
Bakery	191,551	—	—	191,551
Other rendering	167,870	—	—	167,870
Food ingredients	—	894,761	—	894,761
Bioenergy	—	—	234,691	234,691
Biofuels	—	—	39,568	39,568
Other	49,815	90,426	—	140,241
Net sales	$ 1,970,561	$ 1,119,085	$ 274,259	$ 3,363,905

	Year Ended December 29, 2018			
	Feed Ingredients	Food Ingredients	Fuel Ingredients	Total
Geographic Area				
North America	$ 1,586,930	$ 181,213	$ 48,858	$ 1,817,001
Europe	329,341	648,933	247,187	1,225,461
China	28,288	182,369	—	210,657
South America	—	53,206	—	53,206
Other	7,996	73,405	—	81,401
Net sales	$ 1,952,555	$ 1,139,126	$ 296,045	$ 3,387,726
Major product types				
Fats	$ 564,790	$ 163,815	$ —	$ 728,605
Used cooking oil	166,634	—	—	166,634
Proteins	842,878	—	—	842,878
Bakery	180,227	—	—	180,227
Other rendering	129,273	—	—	129,273
Food ingredients	—	886,042	—	886,042
Bioenergy	—	—	247,187	247,187
Biofuels	—	—	48,858	48,858
Other	68,753	89,269	—	158,022
Net sales	$ 1,952,555	$ 1,139,126	$ 296,045	$ 3,387,726

	Year Ended December 30, 2017 (a)			
	Feed Ingredients	Food Ingredients	Fuel Ingredients	Total
Geographic Area Revenues				
North America	$ 1,696,081	$ 193,950	$ 46,996	$ 1,937,027
Europe	503,786	650,177	218,787	1,372,750
China	32,103	177,677	—	209,780
South America	—	60,111	—	60,111
Other	7,522	75,061	—	82,583
Net sales	$ 2,239,492	$ 1,156,976	$ 265,783	$ 3,662,251
Major product types				
Fats	$ 648,328	$ 183,719	$ —	$ 832,047
Used cooking oil	185,516	—	—	185,516
Proteins	816,060	—	—	816,060
Bakery	209,801	—	—	209,801
Other rendering	286,183	—	—	286,183
Food ingredients	—	880,128	—	880,128
Bioenergy	—	—	218,787	218,787
Biofuels	—	—	46,996	46,996
Other	93,604	93,129	—	186,733
Net sales	$ 2,239,492	$ 1,156,976	$ 265,783	$ 3,662,251

(a) As noted above prior year amounts have not been adjusted under the modified retrospective method for billed freight of approximately $160.0 million that is included in net sales for the year ended December 30, 2017.

Revenue from Contracts with Customers

The Company has two primary revenue streams. Finished product revenues are recognized when control of the promised finished product is transferred to the Company's customers, in an amount that reflects the consideration the Company expects to be entitled to in exchange for the finished product. Service revenues are recognized when the service occurs.

<u>Fats and Proteins</u>. Fats and Proteins include the Company's global activities related to the collection and processing of beef, poultry and pork animal by-products into finished products of non-food grade oils, food grade fats and protein meal. Fats and proteins net sales are recognized when the Company ships the finished product to the customer and control has been transferred.

<u>Used Cooking Oil</u>. Used cooking oil includes collection and processing of used cooking oil into finished products of non-food grade fats. Used cooking oil net sales are recognized when the Company ships the finished product to the customer and control has been transferred.

<u>Bakery</u>. Bakery includes collection and processing of bakery residuals into finished product including Cookie Meal®, an animal feed ingredient primarily used in poultry and swine rations. Bakery net sales are recognized when the Company ships the finished product to the customer and control has been transferred.

<u>Other Rendering</u>. Other rendering include hides, pet food products, and service charges. Hides and pet food net sales are recognized when the Company ships the finished product to the customer and control has been transferred. Service revenues are recognized when the service has occurred.

<u>Food Ingredients.</u> Food ingredients includes collection and processing of pigskin, hide, bone and fish into finished product. Also includes harvesting, sorting and selling of hog and sheep casings as well as harvesting, purchasing and processing of hog, sheep and beef meat for pet food industry. Collagen and CTH meat and casings net sales are recognized when the Company ships the finished product to the customer and control has been transferred.

<u>Bioenergy</u>. Bioenergy includes Ecoson, which converts organic sludge and food waste into biogas and Rendac, which collects fallen stock and animal waste for a fee and processes these materials into fats and meals that can only be used as low grade energy or fuel for boilers and cement kilns. Net sales are recognized when the finished product is shipped

to the customer and control has been transferred. Service revenues are recognized in net sales when the service has occurred.

Biofuels. Biofuels includes the North American processing of rendered animal fats, recycled cooking oils and third party additives to produce diesel fuel. Biofuel net sales are recognized when the finished product is shipped to the customer and control has been transferred.

Other. Other includes grease trap collection and environmental services to food processors in the Feed Ingredients segment and Sonac Bone and Sonac Heparin in the Food Ingredients segment. Net sales are recognized when the Company ships the finished product to the customer. Service revenues are recognized when the service has occurred.

Long-Term Performance Obligations. The Company from time to time enters into long-term contracts to supply certain volumes of finished products to certain customers. Revenue recognized in 2019 under these long-term supply contracts was approximately $41.0 million, with the remaining performance obligations to be recognized in future periods (generally 5 years) of approximately $280.8 million.

NOTE 23. QUARTERLY FINANCIAL DATA (UNAUDITED AND IN THOUSANDS EXCEPT PER SHARE AMOUNTS):

	Year Ended December 28, 2019			
	First Quarter	Second Quarter	Third Quarter	Fourth Quarter (a)
Net sales	$ 835,104	$ 827,324	$ 842,049	$ 859,428
Operating income	48,551	74,124	59,859	293,287
Income from operations before income taxes	24,914	38,820	37,687	279,013
Net income	19,640	31,044	26,837	243,446
Net income attributable to minority interests	(1,628)	(4,786)	(1,116)	(837)
Net income attributable to Darling	18,012	26,258	25,721	242,609
Basic earnings per share	0.11	0.16	0.16	1.48
Diluted earnings per share	0.11	0.16	0.15	1.44

	Year Ended December 29, 2018			
	First Quarter (b)	Second Quarter	Third Quarter	Fourth Quarter
Net sales	$ 875,374	$ 846,646	$ 812,576	$ 853,130
Operating income	128,953	36,754	15,556	73,738
Income/(loss) from operations before income taxes	101,787	(27,455)	(6,540)	50,183
Net income/(loss)	98,075	(29,138)	(5,137)	42,144
Net income attributable to minority interests	(770)	(1,282)	(900)	(1,496)
Net income/(loss) attributable to Darling	97,305	(30,420)	(6,037)	40,648
Basic earnings/(loss) per share	0.59	(0.18)	(0.04)	0.25
Diluted earnings/(loss) per share	0.58	(0.18)	(0.04)	0.24

(a) In the fourth quarter of fiscal 2019, the Company's results include 2019 and 2018 blenders tax credits of approximately $234.4 million.

(b) In the first quarter of fiscal 2018, the Company's results includes 2017 blenders tax credits of approximately $92.7 million.

NOTE 24. RELATED PARTY TRANSACTIONS

Raw Material Agreement

The Company has entered into a Raw Material Agreement with the DGD Joint Venture pursuant to which the Company will offer to supply certain animal fats and used cooking oil at market prices, up to the DGD Joint Venture's full operational requirement of feedstock, but the DGD Joint Venture is not obligated to purchase the raw material offered by the Company. Additionally, the Company may offer other feedstocks to the DGD Joint Venture, such as inedible corn oil, purchased on a resale basis. For the years ended December 28, 2019, December 29, 2018 and December 30, 2017, the Company has recorded sales to the DGD Joint Venture of approximately $208.7 million, $131.8 million and $171.3 million, respectively. At December 28, 2019 and December 29, 2018, the Company has approximately $17.8 million and $8.0 million in outstanding receivables due from the DGD Joint Venture, respectively. In addition, the Company has eliminated additional sales of approximately $5.1 million, $4.6 million and $4.1 million for the year ended December 28, 2019, December 29, 2018 and December 30, 2017, respectively to the DGD Joint Venture and deferred the Company's portion of profit on those sales relating to inventory assets still remaining on the DGD Joint Venture's balance sheet at December 28, 2019, December 29, 2018 and December 30, 2017 of approximately $0.8 million, $0.9 million and $0.9 million, respectively.

Revolving Loan Agreement

On May 1, 2019, Darling through its wholly owned subsidiary Darling Green Energy LLC, ("Darling Green"), and a third party Diamond Alternative Energy, LLC ("Diamond Alternative" and together with Darling Green, the "DGD Lenders") entered into a revolving loan agreement (the "DGD Loan Agreement") with the DGD Joint Venture. The DGD Lenders have committed to make loans available to the DGD Joint Venture in the total amount of $50.0 million with each lender committed to $25.0 million of the total commitment. Any borrowings by the DGD Joint Venture under the DGD Loan Agreement are at the applicable annum rate equal to the sum of (a) the LIBO Rate (meaning Reuters BBA Libor Rates Page 3750) on such day plus (b) 2.50%. The DGD Loan Agreement matures on April 29, 2020. The DGD Loan Agreement replaces a similar agreement with lower commitment levels that expired on December 31, 2018. As of December 28, 2019, no amounts are owed to Darling Green under the DGD Loan Agreement.

Guarantee Agreement

In February 2020, in connection with the DGD Joint Venture's expansion project at its Norco, LA facility, it has entered into two agreements (the "IMTT Terminaling Agreements") with International-Matex Tank Terminals ("IMTT"), pursuant to which the DGD Joint Venture will move raw material and finished product to and from the IMTT terminal facility by pipeline, thereby providing better logistical capabilities. As a condition to entering into the IMTT Terminaling Agreements, IMTT required that the Company and Valero guarantee their proportionate share, up to $50 million each, of the DGD Joint Venture's obligations under the IMTT Terminaling Agreements (the "Guarantee"), subject to the conditions provided for in the IMTT Terminaling Agreements. The Company has not recorded any liability as a result of the guarantee, as the Company believes the likelihood of having to make any payments under the guarantee is remote.

NOTE 25. NEW ACCOUNTING PRONOUNCEMENTS

In December 2019, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2019-12, Simplifying the Accounting for Income Taxes. This ASU amends Topic 740 Income Taxes, which will eliminate certain exceptions in accounting for income taxes, improves consistency in application and clarifies existing guidance. The standard is effective for fiscal years beginning after December 15, 2020, with early adoption permitted. The Company is currently evaluating the impact of this standard.

In August 2018, the FASB issued ASU No. 2018-15, Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement that is a Service Contract. This ASU amends Subtopic 350-40, *Intangibles - Goodwill and Other Internal - Use Software*, which will align the requirements for capitalizing implementation costs incurred in a hosting arrangement that is a service contract with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software. The standard is effective for fiscal years beginning after December 15, 2019 and for interim periods therein, with early adoption permitted. Implementation should be applied either retrospectively or prospectively to all implementation costs incurred after the date of adoption. The Company adopted the new accounting standard effective December 30, 2018 and the adoption did not have a material impact on the Company's consolidated financial statements.

In August 2018, the FASB issued ASU No. 2018-14, Changes to the Disclosure Requirements for Defined Benefit Plans. This ASU amends Subtopic 715-20, *Compensation - Retirement Benefits - Defined Benefit Plans - General*, which modifies the disclosure requirements for employers that sponsor defined benefit pension or other postretirement plans by removing and adding certain disclosures for these plans. The standard is effective for fiscal years ending after December 15, 2020, with early adoption permitted. The Company is currently evaluating the impact of this standard.

In August 2018, the FASB issued ASU No. 2018-13, Changes to the Disclosure Requirements for Fair Value Measurements. This ASU amends Topic 820, *Fair Value Measurement*, which changes the disclosure requirements for fair value measurements by removing, adding and modifying certain disclosures. The standard is effective for fiscal years beginning after December 15, 2019 and for interim periods therein, with early adoption permitted. The initial adoption of this ASU is not expected to have a material impact on the Company's consolidated financial statements.

In August 2017, the FASB issued ASU No. 2017-12, Targeted Improvement to Accounting for Hedging Activities. This ASU amends Topic 815, *Derivatives and Hedging*, which is intended to more closely align hedge accounting with companies' risk management strategies and simplify the application of hedge accounting. The guidance includes certain targeted improvements to ease the operational burden of applying hedge accounting. The ASU is effective for fiscal years beginning after December 15, 2018 and for interim periods therein with early adoption permitted. The Company will be required to apply the guidance on a cumulative-effect basis with adjustment to retained earnings as of the beginning of the fiscal year of adoption with disclosure on a prospective basis. The Company adopted this ASU on December 30, 2018 and the initial adoption of this ASU did not have a material impact on the Company's consolidated financial statements.

In January 2017, the FASB issued ASU No. 2017-04 Simplifying the Test for Goodwill Impairment. This ASU amends Topic 350, *Intangibles-Goodwill and Other*, which will simplify the goodwill impairment calculation by eliminating Step 2 from the current goodwill impairment test. Under the new guidance, an entity should perform its annual, or interim, goodwill impairment test by comparing the fair value of a reporting unit with its carrying amount. An entity should recognize an impairment charge for the amount by which the carrying amount exceeds the reporting unit's fair value; however, the loss recognized should not exceed the total amount of goodwill allocated to that reporting unit. The ASU eliminates existing guidance that requires an entity to determine goodwill impairment by calculating the implied fair value of goodwill by hypothetically assigning the fair value of a reporting unit to all of the assets and liabilities as if that reporting unit had been acquired in a business combination. This ASU is effective for fiscal years beginning after December 15, 2019 and interim periods within those fiscal years. The initial adoption of this ASU is not expected to have a material impact on the Company's consolidated financial statements.

In June 2016, the FASB issued ASU No. 2016-13, Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments. Under ASU 2016-13, existing guidance on reporting credit losses for trade and other receivables and available for sale debt securities will be replaced with a new forward-looking “expected loss” model that generally will result in the earlier recognition of allowances for losses. This ASU is effective for fiscal years beginning after December 15, 2019 and interim periods therein. The initial adoption of this ASU is not expected to have a material impact on the Company's consolidated financial statements.

NOTE 26. GUARANTOR FINANCIAL INFORMATION

The Company's 5.25% Notes and 3.625% Notes (see Note 10) are guaranteed on a senior unsecured basis by the following Notes Guarantors, each of which is a 100% directly or indirectly owned subsidiary of Darling and which constitute all of Darling's existing restricted subsidiaries that are Credit Agreement Guarantors (other than Darling's foreign subsidiaries, Darling Global Finance B.V., which issued the 3.625% Notes and is discussed further below, or any receivables entity): Darling National, Griffin and its subsidiary Craig Protein, Darling Global Holdings Inc., EV Acquisition LLC, Rousselot Inc., Rousselot Dubuque Inc., Sonac USA LLC and Rousselot Peabody Inc. In addition, the 3.625% Notes, which were issued by Darling Global Finance B.V., a wholly-owned indirect subsidiary of Darling, are guaranteed on a senior unsecured basis by Darling. The Notes Guarantors, and Darling in the case of the 3.625% Notes, fully and unconditionally guaranteed the 5.25% Notes and 3.625% Notes on a joint and several basis. The following financial statements present condensed consolidating financial data for (i) Darling, (ii) the combined Notes Guarantors, (iii) the combined other subsidiaries of the Company that did not guarantee the 5.25% Notes or the 3.625% Notes (the “Non-guarantors”), and (iv) eliminations necessary to arrive at the Company's consolidated financial statements, which include condensed consolidated balance sheets as of December 28, 2019 and December 29, 2018, and the condensed consolidating statements of operations, the condensed consolidating statements of comprehensive income/(loss) and the condensed consolidating statements of cash flows for the years ended December 28, 2019, December 29, 2018 and December 30, 2017. Separate financial information is not presented for Darling Global Finance B.V. since it was formed as a special purpose finance subsidiary for the purpose of issuing euro-denominated notes such as the 3.625% Notes and therefore does not have any substantial operations or assets.

Condensed Consolidating Balance Sheet
As of December 28, 2019
(in thousands)

	Parent	Guarantors	Non-guarantors	Eliminations	Consolidated
ASSETS					
Cash and cash equivalents	$ 551	$ 26	$ 72,358	$ —	$ 72,935
Restricted cash	103	—	7	—	110
Accounts receivable, net	51,097	702,945	518,614	(866,318)	406,338
Inventories	26,893	86,609	249,455	—	362,957
Income taxes refundable	1,106	—	2,211	—	3,317
Prepaid expenses	20,888	2,241	23,470	—	46,599
Other current assets	5,399	(2,326)	40,872	(18,913)	25,032
Total current assets	106,037	789,495	906,987	(885,231)	917,288
Investment in subsidiaries	5,365,956	1,366,635	844,043	(7,576,634)	—
Property, plant and equipment, net	434,237	524,577	843,597	—	1,802,411
Intangible assets, net	44,404	170,581	311,409	—	526,394
Goodwill	49,902	490,748	682,641	—	1,223,291
Investment in unconsolidated subsidiaries	—	—	689,354	—	689,354
Operating lease right-of-use asset	74,005	31,243	19,478	—	124,726
Other assets	35,456	134	61,974	(50,164)	47,400
Deferred income taxes	—	—	14,394	—	14,394
	$ 6,109,997	$ 3,373,413	$ 4,373,877	$ (8,512,029)	$ 5,345,258
LIABILITIES AND STOCKHOLDERS' EQUITY					
Current portion of long-term debt	$ 40,916	$ 10	$ 68,983	$ (18,913)	$ 90,996
Accounts payable	893,490	29,535	182,484	(866,257)	239,252
Income taxes payable	(10)	—	8,905	—	8,895
Current operating lease liability	20,454	10,510	6,841	—	37,805
Accrued expenses	116,758	32,861	161,833	(61)	311,391
Total current liabilities	1,071,608	72,916	429,046	(885,231)	688,339
Long-term debt, net of current portion	1,040,974	30	567,589	(50,164)	1,558,429
Long-term operating lease liability	58,970	20,281	12,173	—	91,424
Other noncurrent liabilities	80,409	—	35,376	—	115,785
Deferred income taxes	122,109	—	125,822	—	247,931
Total liabilities	2,374,070	93,227	1,170,006	(935,395)	2,701,908
Total stockholders' equity	3,735,927	3,280,186	3,203,871	(7,576,634)	2,643,350
	$ 6,109,997	$ 3,373,413	$ 4,373,877	$ (8,512,029)	$ 5,345,258

Condensed Consolidating Balance Sheet
As of December 29, 2018
(in thousands)

	Parent	Guarantors	Non-guarantors	Eliminations	Consolidated
ASSETS					
Cash and cash equivalents	$ 995	$ 32	$ 106,235	$ —	$ 107,262
Restricted cash	103	—	4	—	107
Accounts receivable, net	56,113	619,628	461,005	(751,009)	385,737
Inventories	23,752	83,261	234,015	—	341,028
Income taxes refundable	2,851	—	3,611	—	6,462
Prepaid expenses	12,890	2,936	19,421	—	35,247
Other current assets	2,680	(1,418)	20,837	—	22,099
Total current assets	99,384	704,439	845,128	(751,009)	897,942
Investment in subsidiaries	4,880,193	1,366,126	844,044	(7,090,363)	—
Property, plant and equipment, net	375,824	503,130	808,904	—	1,687,858
Intangible assets, net	50,132	200,936	344,794	—	595,862
Goodwill	49,506	490,748	688,905	—	1,229,159
Investment in unconsolidated subsidiary	13,969	—	396,208	—	410,177
Other assets	39,395	138	13,842	—	53,375
Deferred income taxes	—	—	14,981	—	14,981
	$ 5,508,403	$ 3,265,517	$ 3,956,806	$ (7,841,372)	$ 4,889,354
LIABILITIES AND STOCKHOLDERS’ EQUITY					
Current portion of long-term debt	$ 3,558	$ 5	$ 3,929	$ —	$ 7,492
Accounts payable	783,406	24,388	162,678	(750,993)	219,479
Income tax payable	(10)	—	4,053	—	4,043
Accrued expenses	107,572	33,387	168,541	(16)	309,484
Total current liabilities	894,526	57,780	339,201	(751,009)	540,498
Long-term debt, net of current portion	1,019,130	18	647,792	—	1,666,940
Other noncurrent liabilities	78,589	—	36,443	—	115,032
Deferred income taxes	95,710	—	135,353	—	231,063
Total liabilities	2,087,955	57,798	1,158,789	(751,009)	2,553,533
Total stockholders' equity	3,420,448	3,207,719	2,798,017	(7,090,363)	2,335,821
	$ 5,508,403	$ 3,265,517	$ 3,956,806	$ (7,841,372)	$ 4,889,354

Condensed Consolidating Statements of Operations
For the year ended December 28, 2019
(in thousands)

	Parent	Guarantors	Non-guarantors	Eliminations	Consolidated
Net sales	$ 652,708	$ 1,305,464	$ 1,637,861	$ (232,128)	$ 3,363,905
Cost and expenses:					
Cost of sales and operating expenses	515,286	1,078,247	1,227,680	(232,128)	2,589,085
Loss (gain) on sale of assets	(403)	(7,356)	(12,823)	—	(20,582)
Selling, general and administrative expenses	187,851	43,855	126,817	—	358,523
Depreciation and amortization	61,777	104,247	159,486	—	325,510
Total costs and expenses	764,511	1,218,993	1,501,160	(232,128)	3,252,536
Equity in net income of Diamond Green Diesel	—	—	364,452	—	364,452
Operating income/(loss)	(111,803)	86,471	501,153	—	475,821
Interest expense	(56,240)	(167)	(22,267)	—	(78,674)
Debt extinguishment costs	(12,126)	—	—	—	(12,126)
Foreign currency gains/(losses)	(306)	4	(1,009)	—	(1,311)
Gain on disposal of subsidiaries	—	—	2,967	—	2,967
Other income/(expense), net	(5,828)	(880)	37	—	(6,671)
Equity in net income/(loss) of other unconsolidated subsidiaries	(2,425)	—	2,853	—	428
Earnings in investments in subsidiaries	471,827	—	—	(471,827)	—
Income/(loss) from operations before taxes	283,099	85,428	483,734	(471,827)	380,434
Income taxes (benefit)	(29,501)	13,354	75,614	—	59,467
Net income attributable to noncontrolling interests	—	—	(8,367)	—	(8,367)
Net income/(loss) attributable to Darling	$ 312,600	$ 72,074	$ 399,753	$ (471,827)	$ 312,600

Condensed Consolidating Statements of Operations
For the year ended December 29, 2018
(in thousands)

	Parent	Guarantors	Non-guarantors	Eliminations	Consolidated
Net sales	$ 541,499	$ 1,338,376	$ 1,738,427	$ (230,576)	$ 3,387,726
Cost and expenses:					
Cost of sales and operating expenses	422,028	1,080,420	1,374,502	(230,576)	2,646,374
Loss (gain) on sale of assets	(86)	(184)	979	—	709
Selling, general and administrative expenses	149,715	46,199	113,350	—	309,264
Restructuring and impairment charges	—	—	14,965	—	14,965
Depreciation and amortization	48,941	107,581	164,670	—	321,192
Total costs and expenses	620,598	1,234,016	1,668,466	(230,576)	3,292,504
Equity in net income of Diamond Green Diesel	—	—	159,779	—	159,779
Operating income/(loss)	(79,099)	104,360	229,740	—	255,001
Interest expense	(56,832)	7,397	(36,994)	—	(86,429)
Debt extinguishment costs	(15,635)	—	(7,874)	—	(23,509)
Foreign currency gains/(losses)	(431)	(103)	(5,897)	—	(6,431)
Gain/(loss) on sale of subsidiaries	(15,583)	—	3,038	—	(12,545)
Other income/(expense), net	(18,487)	(1,019)	11,944	—	(7,562)
Equity in net income/(loss) of unconsolidated subsidiaries	(2,622)	—	2,072	—	(550)
Earnings in investments in subsidiaries	270,943	—	—	(270,943)	—
Income/(loss) from operations before taxes	82,254	110,635	196,029	(270,943)	117,975
Income taxes (benefit)	(19,242)	11,282	19,991	—	12,031
Net income attributable to noncontrolling interests	—	—	(4,448)	—	(4,448)
Net income/(loss) attributable to Darling	$ 101,496	$ 99,353	$ 171,590	$ (270,943)	$ 101,496

**Condensed Consolidating Statements of Operations
For the year ended December 30, 2017
(in thousands)**

	Parent	Guarantors	Non-guarantors	Eliminations	Consolidated
Net sales	$ 545,699	$ 1,464,920	$ 1,893,304	$ (241,672)	$ 3,662,251
Cost and expenses:					
Cost of sales and operating expenses	429,983	1,198,528	1,488,841	(241,672)	2,875,680
Loss (gain) on sale of assets	(302)	(257)	322	—	(237)
Selling, general and administrative expenses	150,880	55,053	137,569	—	343,502
Depreciation and amortization	42,366	106,406	153,328	—	302,100
Total costs and expenses	622,927	1,359,730	1,780,060	(241,672)	3,521,045
Equity in net income of Diamond Green Diesel	—	—	28,239	—	28,239
Operating income/(loss)	(77,228)	105,190	141,483	—	169,445
Interest expense	(55,336)	15,818	(49,408)	—	(88,926)
Foreign currency gains/(losses)	(234)	114	(6,778)	—	(6,898)
Loss on sale of subsidiaries	—	—	(885)	—	(885)
Other income/(expense), net	(14,651)	37	5,813	—	(8,801)
Equity in net income/(loss) of unconsolidated subsidiary	(1,847)	—	2,112	—	265
Earnings in investments in subsidiaries	438,580	—	—	(438,580)	—
Income/(loss) from operations before taxes	289,284	121,159	92,337	(438,580)	64,200
Income taxes (benefit)	160,816	(130,508)	(99,462)	—	(69,154)
Net income attributable to noncontrolling interests	—	—	(4,886)	—	(4,886)
Net income/(loss) attributable to Darling	$ 128,468	$ 251,667	$ 186,913	$ (438,580)	$ 128,468

**Condensed Consolidating Statements of Comprehensive Income/(Loss)
For the year ended December 28, 2019
(in thousands)**

	Parent	Guarantors	Non-guarantors	Eliminations	Consolidated
Net income	$ 320,967	$ 72,074	$ 399,753	$ (471,827)	$ 320,967
Other comprehensive income/(loss), net of tax:					
Foreign currency translation	837	—	(12,771)	—	(11,934)
Pension adjustments	4,287	—	(2,752)	—	1,535
Corn option derivative adjustments	278	—	—	—	278
Heating oil derivative adjustments	—	—	(3,141)	—	(3,141)
Foreign exchange derivative adjustments	—	—	(3,723)	—	(3,723)
Total other comprehensive income/(loss), net of tax	5,402	—	(22,387)	—	(16,985)
Total comprehensive income/(loss)	326,369	72,074	377,366	(471,827)	303,982
Comprehensive income attributable to noncontrolling interests	—	—	8,690	—	$ 8,690
Comprehensive income/(loss) attributable to Darling	$ 326,369	$ 72,074	$ 368,676	$ (471,827)	$ 295,292

Condensed Consolidating Statements of Comprehensive Income/(Loss)
For the year ended December 29, 2018
(in thousands)

	Parent	Guarantors	Non-guarantors	Eliminations	Consolidated
Net income	$ 105,944	$ 99,353	$ 171,590	$ (270,943)	$ 105,944
Other comprehensive income/(loss), net of tax:					
Foreign currency translation	1,724	(53,387)	(35,811)	—	(87,474)
Pension adjustments	(4,184)	—	1,454	—	(2,730)
Natural gas swap derivative adjustments	23	—	—	—	23
Corn option derivative adjustments	(1,687)	—	—	—	(1,687)
Foreign exchange derivative adjustments	—	—	1,081	—	1,081
Total other comprehensive income, net of tax	(4,124)	(53,387)	(33,276)	—	(90,787)
Total comprehensive income/(loss)	$ 101,820	$ 45,966	$ 138,314	$ (270,943)	$ 15,157
Comprehensive income attributable to noncontrolling interests	—	—	3,894	—	3,894
Comprehensive income/(loss) attributable to Darling	$ 101,820	$ 45,966	$ 134,420	$ (270,943)	$ 11,263

Condensed Consolidating Statements of Comprehensive Income/(Loss)
For the year ended December 30, 2017
(in thousands)

	Parent	Guarantors	Non-guarantors	Eliminations	Consolidated
Net income	$ 133,354	$ 251,667	$ 186,913	$ (438,580)	$ 133,354
Other comprehensive income/(loss), net of tax:					
Foreign currency translation	—	—	121,810	—	121,810
Pension adjustments	4,797	—	1,032	—	5,829
Natural gas swap derivative adjustments	(18)	—	—	—	(18)
Corn option derivative adjustments	(1,078)	—	—	—	(1,078)
Total other comprehensive income/(loss), net of tax	3,701	—	122,842	—	126,543
Total comprehensive income/(loss)	$ 137,055	$ 251,667	$ 309,755	$ (438,580)	$ 259,897
Comprehensive income attributable to noncontrolling interests	—	—	947	—	947
Comprehensive income/(loss) attributable to Darling	$ 137,055	$ 251,667	$ 308,808	$ (438,580)	$ 258,950

Condensed Consolidating Statements of Cash Flows
For the year ended December 28, 2019
(in thousands)

	Parent	Guarantors	Non-guarantors	Eliminations	Consolidated
Cash flows from operating activities:					
Net income	$ 320,967	$ 72,074	$ 399,753	$ (471,827)	$ 320,967
Earnings in investments in subsidiaries	(471,827)	—	—	471,827	—
Other operating cash flows	244,255	5,020	(207,621)	—	41,654
Net cash provided by operating activities	93,395	77,094	192,132	—	362,621
Cash flows from investing activities:					
Capital expenditures	(113,632)	(94,659)	(151,207)	—	(359,498)
Acquisitions, net of cash acquired	(1,157)	—	(274)	—	(1,431)
Investment in subsidiaries and affiliates	(2,393)	(393)	—	786	(2,000)
Proceeds from sale of investment in subsidiary	—	—	3,671	—	3,671
Note receivable from affiliates	50,164	—	(50,164)	—	—
Gross proceeds from sale of property, plant and equipment and other assets	1,034	12,459	4,742	—	18,235
Proceeds from insurance settlements	1,493	5,107	—	—	6,600
Payments related to routes and other intangibles	(131)	—	(3,520)	—	(3,651)
Net cash provide/(used) in investing activities	(64,622)	(77,486)	(196,752)	786	(338,074)
Cash flows from financing activities:					
Proceeds from long-term debt	500,000	—	17,606	—	517,606
Payments on long-term debt	(545,872)	(7)	(35,284)	—	(581,163)
Borrowings from revolving credit facility	281,000	—	188,227	—	469,227
Payments on revolving credit facility	(242,000)	—	(219,669)	—	(461,669)
Net overdraft financing	8,358	—	30,009	—	38,367
Deferred loan costs	(7,027)	—	—	—	(7,027)
Issuance of common stock	39	—	—	—	39
Repurchase of common stock	(19,260)	—	—	—	(19,260)
Contributions from parent	—	393	393	(786)	—
Minimum withholding taxes paid on stock awards	(4,455)	—	(17)	—	(4,472)
Distributions to noncontrolling interests	—	—	(6,533)	—	(6,533)
Net cash provided/(used) in financing activities	(29,217)	386	(25,268)	(786)	(54,885)
Effect of exchange rate changes on cash and cash equivalent	—	—	(3,986)	—	(3,986)
Net increase/(decrease) in cash, cash equivalents and restricted cash	(444)	(6)	(33,874)	—	(34,324)
Cash, cash equivalents and restricted cash at beginning of year	1,098	32	106,239	—	107,369
Cash, cash equivalents and restricted cash at end of year	$ 654	$ 26	$ 72,365	$ —	$ 73,045

Condensed Consolidating Statements of Cash Flows
For the year ended December 29, 2018
(in thousands)

	Parent	Guarantors	Non-guarantors	Eliminations	Consolidated
Cash flows from operating activities:					
Net income/(loss)	$ 105,944	$ 99,353	$ 171,590	$ (270,943)	$ 105,944
Earnings in investments in subsidiaries	(270,943)	—	—	270,943	—
Other operating cash flows	323,903	(81,561)	50,329	—	292,671
Net cash provided by operating activities	158,904	17,792	221,919	—	398,615
Cash flows from investing activities:					
Capital expenditures	(115,004)	(90,402)	(116,490)	—	(321,896)
Acquisitions, net of cash acquired	(100,500)	—	(7,227)	—	(107,727)
Investment in subsidiaries and affiliates	(12,250)	(198,880)	—	198,880	(12,250)
Proceeds from sale of investment in subsidiary	79,955	—	2,805	—	82,760
Note receivable from affiliates	—	266,880	(266,880)	—	—
Gross proceeds from sale of property, plant and equipment and other assets	2,125	1,146	16,057	—	19,328
Proceeds from insurance settlements	750	503	—	—	1,253
Payments related to routes and other intangibles	(299)	—	(3,584)	—	(3,883)
Net cash provided/(used) in investing activities	(145,223)	(20,753)	(375,319)	198,880	(342,415)
Cash flows from financing activities:					
Proceeds from long-term debt	—	—	624,620	—	624,620
Payments on long-term debt	(15,116)	—	(671,512)	—	(686,628)
Borrowings from revolving credit facility	351,000	—	192,898	—	543,898
Payments on revolving credit facility	(351,000)	—	(159,974)	—	(510,974)
Net overdraft financing	3,558	—	(98)	—	3,460
Deferred loan costs	(824)	—	(8,844)	—	(9,668)
Issuances of common stock	182	—	—	—	182
Contributions from parent	—	—	198,880	(198,880)	—
Minimum withholding taxes paid on stock awards	(2,210)	—	(5)	—	(2,215)
Distributions to noncontrolling interest	—	—	(10,257)	—	(10,257)
Net cash provided/(used) in financing activities	(14,410)	—	165,708	(198,880)	(47,582)
Effect of exchange rate changes on cash and cash equivalents	—	—	(8,165)	—	(8,165)
Net increase/(decrease) in cash, cash equivalents and restricted cash	(729)	(2,961)	4,143	—	453
Cash, cash equivalents and restricted cash at beginning of year	1,827	2,993	102,096	—	106,916
Cash, cash equivalents and restricted cash at end of year	$ 1,098	$ 32	$ 106,239	$ —	$ 107,369

Condensed Consolidating Statements of Cash Flows
For the year ended December 30, 2017
(in thousands)

	Parent	Guarantors	Non-guarantors	Eliminations	Consolidated
Cash flows from operating activities:					
Net income/(loss)	$ 133,354	$ 251,667	$ 186,913	$ (438,580)	$ 133,354
Earnings in investments in subsidiaries	(438,580)	—	—	438,580	—
Other operating cash flows	489,302	(240,494)	28,274	—	277,082
Net cash provided/(used) by operating activities	184,076	11,173	215,187	—	410,436
Cash flows from investing activities:					
Capital expenditures	(83,520)	(74,384)	(116,264)	—	(274,168)
Acquisitions, net of cash acquired	—	(12,144)	—	—	(12,144)
Investment in subsidiaries and affiliates	(6,309)	(13,386)	—	14,945	(4,750)
Note receivable from affiliates	—	82,000	(82,000)	—	—
Gross proceeds from sale of property, plant and equipment and other assets	2,577	3,980	1,533	—	8,090
Proceeds from insurance settlements	—	—	6,054	—	6,054
Payments related to routes and other intangibles	(7,135)	—	—	—	(7,135)
Net cash provided/(used) in investing activities	(94,387)	(13,934)	(190,677)	14,945	(284,053)
Cash flows from financing activities:					
Proceeds from long-term debt	—	—	33,401	—	33,401
Payments on long-term debt	(79,706)	—	(69,917)	—	(149,623)
Borrowing from revolving credit facility	170,000	—	29,495	—	199,495
Payments on revolving credit facility	(170,000)	—	(34,935)	—	(204,935)
Net overdraft financing	—	—	(714)	—	(714)
Deferred loan costs	(6,717)	—	—	—	(6,717)
Issuances of common stock	22	—	—	—	22
Contributions from parent	—	—	14,945	(14,945)	—
Minimum withholding taxes paid on stock awards	(3,034)	—	(15)	—	(3,049)
Deductions to noncontrolling interest	—	—	(17,451)	—	(17,451)
Distributions to noncontrolling interests	—	—	(5,281)	—	(5,281)
Net cash provided/(used) in financing activities	(89,435)	—	(50,472)	(14,945)	(154,852)
Effect of exchange rate changes on cash and cash equivalents	—	—	20,528	—	20,528
Net increase/(decrease) in cash, cash equivalents and restricted cash	254	(2,761)	(5,434)	—	(7,941)
Cash, cash equivalents and restricted cash at beginning of year	1,573	5,754	107,530	—	114,857
Cash, cash equivalents and restricted cash at end of year	$ 1,827	$ 2,993	$ 102,096	$ —	$ 106,916

PART II

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures.

As required by Rule 13a-15(b) under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), the Company's management, including the Chief Executive Officer and Chief Financial Officer, conducted an evaluation, as of the end of the period covered by this report, of the effectiveness of the design and operation of the Company's disclosure controls and procedures. As defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, disclosure controls and procedures are controls and other procedures of the Company that are designed to ensure that information required to be disclosed by the Company in the reports it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by the Company in the reports it files or submits under the Exchange Act is accumulated and communicated to the Company's management, including the Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure.

Based on management's evaluation, the Chief Executive Officer and Chief Financial Officer concluded that the Company's disclosure controls and procedures were effective as of the end of the period covered by this report.

Internal Control over Financial Reporting.

(a) *Management's Annual Report on Internal Control over Financial Reporting.* Management of the Company is responsible for establishing and maintaining adequate internal control over financial reporting, as defined in Rules 13a-15(f) and 15d-15(f) promulgated under the Exchange Act. Those rules define internal control over financial reporting as a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles and includes those policies and procedures that:

- Pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Company;
- Provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the Company are being made only in accordance with authorizations of management and directors of the Company; and
- Provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

The Company's management assessed the effectiveness of the Company's internal control over financial reporting as of December 28, 2019. In making this assessment, the Company's management used the criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) (2013).

Based on their assessment, management has concluded that the Company's internal control over financial reporting was effective at the reasonable assurance level as of December 28, 2019.

KPMG LLP, the registered public accounting firm that audited the Company's financial statements, has issued an audit report on management's assessment of the Company's internal control over financial reporting, which report is included herein.

(b) *Attestation Report of the Registered Public Accounting Firm.* The attestation report called for by Item 308(b) of Regulation S-K is incorporated herein by reference to Report of Independent Registered Public Accounting Firm on Internal Control Over Financial Reporting, included in Part II, Item 8. “Financial Statements and Supplementary Data” of this report.

(c) *Changes in Internal Control over Financial Reporting*. As required by Exchange Act Rule 13a-15(d), the Company's management, including the Chief Executive Officer and Chief Financial Officer, also conducted an evaluation of the Company's internal control over financial reporting to determine whether any change occurred during the last fiscal quarter of the period covered by this report that has materially affected, or is reasonably likely to materially affect, the Company’s internal control over financial reporting. Based on that evaluation there has been no change in the Company’s internal control over financial reporting during the last fiscal quarter of the period covered by this report other than SOX control changes related to the upgrade of accounting software at its international operations that has materially affected, or is reasonably likely to materially affect the Company's internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

None.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information required by this Item with respect to Items 401, 405 and 407 of Regulation S-K will appear in the sections entitled "Election of Directors," "Our Management - Executive Officers and Directors," "Delinquent Section 16 (a) Reports" and "Corporate Governance-Committees of the Board - Audit Committee" included in the Company's definitive Proxy Statement relating to the 2020 annual meeting of stockholders, which will be filed no later than 120 days after December 28, 2019, and such information is incorporated herein by reference.

The Company has adopted the Darling Ingredients Inc. Code of Conduct ("Code of Conduct"), which is applicable to all of the Company's employees, including its senior financial officers, the Chief Executive Officer, Chief Financial Officer, Chief Accounting Officer, Controller, Treasurer and General Counsel. A copy of the Company's Code of Conduct has been posted on the "Investor" portion of our web site, at www.darlingii.com. We intend to satisfy the disclosure requirements of the SEC regarding amendments to, or waivers from, the Code of Conduct by posting such information on the same web site.

ITEM 11. EXECUTIVE COMPENSATION

The information required by this Item will appear in the sections entitled "Executive Compensation," "Compensation Committee Report" and "Corporate Governance - Compensation Committee Interlocks and Insider Participation" included in the Company's definitive Proxy Statement relating to the 2020 annual meeting of stockholders, which will be filed no later than 120 days after December 28, 2019, and such information is incorporated herein by reference.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

EQUITY COMPENSATION PLANS

The following table sets forth certain information as of December 28, 2019, with respect to the Company's equity compensation plans (including individual compensation arrangements) under which the Company's equity securities are authorized for issuance, aggregated by (i) all compensation plans previously approved by the Company's security holders, and (ii) all compensation plans not previously approved by the Company's security holders. The table includes:

- the number of securities to be issued upon the exercise of outstanding options and granted non-vested stock;
- the weighted-average exercise price of the outstanding options and granted non-vested stock; and
- the number of securities that remain available for future issuance under the plans.

Plan Category	(a) Number of securities to be issued upon exercise of outstanding options, warrants and rights		(b) Weighted-average exercise price of outstanding options, warrants and rights	(c) Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a))
Equity compensation plans approved by security holders	6,110,844	(1)	$14.04	12,522,616
Equity compensation plans not approved by security holders	–		–	–
Total	6,110,844		$14.04	12,522,616

(1) Includes shares underlying options that have been issued and granted non-vested stock pursuant to the Company's 2004 Omnibus Incentive Plan, 2012 Omnibus Incentive Plan and 2017 Omnibus Incentive Plan, each as approved by the Company's stockholders. See Note 13 of Notes to Consolidated Financial Statements for information regarding the material features of the 2017 Omnibus Incentive Plan.

The information required by this Item with respect to Item 403 of Regulation S-K will appear in the section entitled “Security Ownership of Certain Beneficial Owners and Management” included in the Company’s definitive Proxy Statement relating to the 2019 annual meeting of stockholders, which will be filed no later than 120 days after December 28, 2019, and such information is incorporated herein by reference.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required by this Item will appear in the sections entitled “Transactions with Related Persons, Promoters and Certain Control Persons,” “Corporate Governance – Code of Business Conduct” and “Corporate Governance - Independent Directors” included in the Company's definitive Proxy Statement relating to the 2020 annual meeting of stockholders, which will be filed no later than 120 days after December 28, 2019, and such information is incorporated herein by reference.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

The information required by this Item will appear in the section entitled “Ratification of Selection of Independent Registered Public Accountant” included in the Company’s definitive Proxy Statement relating to the 2020 annual meeting of stockholders, which will be filed no later than 120 days after December 28 2019, and such information is incorporated herein by reference.

PART IV

ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES

(a) Documents filed as part of this report:

(1) The following consolidated financial statements are included in Item 8.

All other schedules are omitted since the required information is not present or is not present in amounts sufficient to require submission of the schedule, or because the information required is included in the consolidated financial statements and notes thereto.

(3) Exhibits

(With regard to applicable cross-references in the list of exhibits below, the Company's Current, Quarterly and Annual Reports are filed with the Securities and Exchange Commission under File No. 001-13323).

Exhibit No.	
3.1	Restated Certificate of Incorporation of the Company, as amended (filed as Exhibit 3.1 to the Company's Registration Statement on Form S-1 filed May 23, 2002 and incorporated herein by reference).
3.2	Certificate of Amendment of Restated Certificate of Incorporation of the Company (filed as Exhibit 3.2 to the Company's Annual Report on Form 10-K filed March 2, 2011 and incorporated herein by reference).
3.3	Certificate of Amendment of Restated Certificate of Incorporation of the Company (filed as Exhibit 3.1 to the Company's Current Report on Form 8-K filed November 27, 2013 and incorporated herein by reference).
3.4	Certificate of Amendment of Restated Certificate of Incorporation of the Company (filed as Exhibit 3.1 to the Company's Current Report on Form 8-K filed May 7, 2014 and incorporated herein by reference).
3.5	Amended and Restated Bylaws of the Company (filed as Exhibit 3.1 to the Company's Current Report on Form 8-K filed March 1, 2017 and incorporated herein by reference).
4.1	Certificate of Designation, Preferences and Rights of Series A Preferred Stock (filed as Exhibit 4.2 to the Company's Registration Statement on Form S-1 filed May 23, 2002 and incorporated herein by reference).
4.2	Senior Notes Indenture, dated as of May 2, 2018, by and among Darling Global Finance B.V., Darling Ingredients Inc., the subsidiary guarantors party thereto from time to time, Citibank, N.A., London Branch, as trustee and principal paying agent, and Citigroup Global Markets Deutschland AG, as principal registrar (filed as Exhibit 4.1 to the Company's Current Report on Form 8-K filed May 2, 2018 and incorporated herein by reference).
4.3	Senior Notes Indenture, dated as of April 3, 2019, by and among Darling Ingredients Inc., the guarantors party thereto from time to time, and Regions Bank, as trustee (filed as Exhibit 4.1 to the Company's Current Report on Form 8-K filed April 3, 2019 and incorporated herein by reference).
10.1	Second Amended and Restated Credit Agreement, dated as of January 6, 2014, by and among Darling International Inc., the other borrowers party thereto from time to time, the lenders party thereto, JPMorgan Chase Bank, N.A., as administrative agent, and the other agents from time to time party thereto (filed as Exhibit 10.1 to the Company's Current Report on Form 8-K filed January 10, 2014 and incorporated herein by reference).
10.2	First Amendment to the Second Amended and Restated Credit Agreement, dated as of May 13, 2015, among the Company, as the parent borrower, the other subsidiary borrowers party thereto, JPMorgan Chase Bank, N.A., as administrative agent, and certain lenders party thereto (filed as Exhibit 10.1 to the Company's Current Report on Form 8-K filed May 15, 2015 and incorporated herein by reference).
10.3	Second Amendment to the Second Amended and Restated Credit Agreement, dated as of September 23, 2015, among the Company, as the parent borrower, the other subsidiary borrowers party thereto, JPMorgan Chase Bank, N.A., as administrative agent, and certain lenders party thereto (filed as Exhibit 10.1 to the Company's Current Report on Form 8-K filed September 25, 2015 and incorporated herein by reference).
10.4	Third Amendment to the Second Amended and Restated Credit Agreement, dated as of October 14, 2015, among the Company, as the parent borrower, the other subsidiary borrowers party thereto, JPMorgan Chase Bank, N.A., as administrative agent, and certain lenders party thereto (filed as Exhibit 10.1 to the Company's Current Report on Form 8-K filed October 14, 2015 and incorporated herein by reference).
10.5	Fourth Amendment to Second Amended and Restated Credit Agreement, dated as of December 16, 2016, by and among Darling Ingredients Inc., as the parent borrower, the other subsidiary borrowers party thereto, the subsidiary guarantors, JPMorgan Chase Bank, N.A., as administrative agent, and certain lenders party thereto (filed as Exhibit 10.1 to the Company's Current Report on Form 8-K filed December 20, 2016 and incorporated herein by reference).

10.6	Fifth Amendment to Second Amended and Restated Credit Agreement, dated as of December 18, 2017, by and among Darling Ingredients Inc., as the parent borrower, the other subsidiary borrowers party thereto, the subsidiary guarantors, JPMorgan Chase Bank, N.A., as administrative agent, and certain lenders party thereto (filed as Exhibit 10.1 to the Company’s Current Report on Form 8-K filed December 20, 2017 and incorporated herein by reference).
10.7	Second Amended and Restated Security Agreement, dated as of January 6, 2014, by and among Darling International Inc., its subsidiaries signatory thereto and any other subsidiary who may become a party thereto and JPMorgan Chase Bank, N.A, as administrative agent (filed as Exhibit 10.2 to the Company's Current Report on Form 8-K filed January 10, 2014 and incorporated herein by reference).
10.8	Second Amended and Restated Guaranty Agreement, dated as of January 6, 2014, by and among Darling International Inc., its subsidiaries signatory thereto and any other subsidiary who may become a party thereto and JPMorgan Chase Bank, N.A., as administrative agent (filed as Exhibit 10.3 to the Company’s Current Report on Form 8-K filed January 10, 2014 and incorporated herein by reference).
10.9	Second Amended and Restated Limited Liability Company Agreement, dated as of May 1, 2019, by and among Diamond Green Diesel Holdings LLC, Darling Green Energy LLC and Diamond Alternative Energy, LLC. (filed as Exhibit 10.1 to the Company’s Current Report on Form 8-K filed May 7, 2019 and incorporated herein by reference).
10.10	Raw Material Supply Agreement, dated as of May 31, 2011, by and between Diamond Green Diesel LLC and Darling International Inc. (filed as Exhibit 10 to the Company's Quarterly Report on Form 10-Q filed August 11, 2011 and incorporated herein by reference).
10.11	Ground Lease, dated as of December 17, 2010, by and between Martom Properties, LLC and Griffin Industries, Inc. (Butler, Kentucky) (filed as Exhibit 10.6 to the Company’s Current Report on Form 8-K filed December 20, 2010 and incorporated herein by reference).
10.12	Ground Lease, dated as of December 17, 2010, by and between Martom Properties, LLC and Griffin Industries, Inc. (Henderson, Kentucky) (filed as Exhibit 10.7 to the Company’s Current Report on Form 8-K filed December 20, 2010 and incorporated herein by reference).
10.13 *	Darling International Inc. 2004 Omnibus Incentive Plan (filed as Exhibit 10.1 to the Company’s Current Report on Form 8-K filed May 17, 2005 and incorporated herein by reference).
10.14 *	Amendment to Darling International Inc. 2004 Omnibus Incentive Plan (filed as Exhibit 10.1 to the Company’s Current Report on Form 8-K filed January 22, 2007 and incorporated herein by reference).
10.15 *	Amendment to Darling International Inc. 2004 Omnibus Incentive Plan (filed as Exhibit 10.15 to the Company's Current Report on Form 10-K filed February 28, 2017 and incorporated herein by reference).
10.16 *	Darling International Inc. 2012 Omnibus Incentive Plan (filed as Exhibit 99 to the Company’s Registration Statement on Form S-8 filed May 31, 2012 and incorporated herein by reference).
10.17 *	Amendment to Darling International Inc. 2012 Omnibus Incentive Plan (filed as Exhibit 10.17 to the Company's Current Report on Form 10-K filed February 28, 2017 and incorporated herein by reference).
10.18 *	Darling Ingredients Inc. 2017 Omnibus Incentive Plan (filed as Exhibit 4.6 to the Company’s Registration Statement on Form S-8 filed May 9, 2017 and incorporated herein by reference).
10.19 *	Form of Performance Award Agreement for use in connection with awards under the 2012 Omnibus Incentive Plan (filed as Exhibit 10.1 to the Company’s Quarterly Report on Form 10-Q filed May 12, 2016 and incorporated herein by reference).
10.20 *	Form of Stock Option Notice and Agreement for use in connection with awards under the 2012 Omnibus Incentive Plan (filed as Exhibit 10.2 to the Company’s Quarterly Report on Form 10-Q filed May 12, 2016 and incorporated herein by reference).
10.21 *	Form of Performance Unit Award Agreement under the Darling International Inc. 2012 Omnibus Incentive Plan (filed as Exhibit 10.1 to the Company’s Current Report on Form 8-K filed January 6, 2014 and incorporated herein by reference).
10.22 *	Form of Performance Unit Award Agreement for 2017 awards under the 2017 Omnibus Incentive Plan (filed as Exhibit 10.1 to the Company’s Quarterly Report on Form 10-Q filed May 11, 2017 and incorporated herein by reference).

10.23 *	Form of Performance Unit Award Agreement under the 2017 Omnibus Incentive Plan effective January 2018 (filed as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q filed May 9, 2018 and incorporated herein by reference).
10.24 *	Form of Stock Option Notice and Agreement for 2017 awards under the 2017 Omnibus Incentive Plan (filed as Exhibit 10.2 to the Company’s Quarterly Report on Form 10-Q filed May 11, 2017 and incorporated herein by reference).
10.25 *	Form of Stock Option Notice and Agreement under the 2017 Omnibus Incentive Plan effective January 2018 (filed as Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q filed May 9, 2018 and incorporated herein by reference).
10.26 *	Non-Employee Director Restricted Stock Award Plan (filed as Exhibit 10.2 to the Company’s Current Report on Form 8-K filed March 15, 2006 and incorporated herein by reference).
10.27 *	Amendment No. 1 to Non-Employee Director Restricted Stock Award Plan, effective as of January 15, 2009 (filed as Exhibit 10.04 to the Company’s Current Report on Form 8-K filed January 21, 2009 and incorporated herein by reference).
10.28 *	Amended and Restated Non-Employee Director Restricted Stock Award Plan, (filed as Exhibit 10.1 to the Company’s Current Report on Form 8-K filed February 28, 2011 and incorporated herein by reference).
10.29 *	Form of Notice of Grant of Restricted Stock Unit Award (Non-Employee Directors) under the Darling International Inc. 2012 Omnibus Incentive Plan (filed as Exhibit 10.1 to the Company’s Quarterly Report on Form 10-Q filed August 7, 2014 and incorporated herein by reference).
10.30 *	Form of Notice of Grant of Restricted Stock Unit Award (Non-Employee Directors) under the Darling International Inc. 2017 Omnibus Incentive Plan (filed as Exhibit 10.1 to the Company’s Quarterly Report on Form 10-Q filed August 9, 2017 and incorporated herein by reference).
10.31 *	Amended and Restated Employment Agreement, dated as of January 1, 2009, between Darling International Inc. and Randall C. Stuewe (filed as Exhibit 10.01 to the Company’s Current Report on Form 8-K filed January 21, 2009 and incorporated herein by reference).
10.32 *	Amendment No. 1, dated as of March 23, 2015, to Amended and Restated Employment Agreement between Darling Ingredients Inc. and Randall C. Stuewe (filed as Exhibit 10.1 to the Company’s Current Report on Form 8-K filed March 25, 2015 and incorporated herein by reference).
10.33 *	Employment Agreement, dated August 21, 2014, between Darling International Netherlands BV and J.M.I.M. (Jan) van der Velden (filed as Exhibit 10.3 to the Company's Quarterly Report on Form 10-Q filed May 9, 2018 and incorporated herein by reference).
10.34 *	Employment Agreement, dated February 9, 2016, between Darling International Netherlands BV and Jos Vervoort (filed as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q filed May 8, 2019 and incorporated herein by reference).
10.35 *	Form of Senior Executive Termination Benefits Agreement (filed as Exhibit 10.1 to the Company’s Current Report on Form 8-K filed November 29, 2007 and incorporated herein by reference).
10.36 *	Form of Addendum to Senior Executive Termination Benefits Agreement (filed as Exhibit 10.2 to the Company’s Current Report on Form 8-K filed December 12, 2008 and incorporated herein by reference).
10.37 *	Form of Third Addendum to Senior Executive Termination Benefits Agreement (filed as Exhibit 10.4 to the Company’s Current Report on Form 8-K filed December 13, 2010 and incorporated herein by reference).
10.38 *	Amended and Restated Senior Executive Termination Benefits Agreement, dated effective as of January 1, 2018, between Darling Ingredients Inc. and John O. Muse (filed as Exhibit 10.36 to the Company's Annual Report on Form 10-K filed February 28, 2017 and incorporated herein by reference).
10.39 *	Form of Indemnification Agreement between Darling International Inc. and its directors and executive officers (filed as Exhibit 10.1 to the Company’s Current Report on Form 8-K filed February 25, 2008 and incorporated herein by reference).
21	Subsidiaries of the Registrant (filed herewith).
23.1	Consent of KPMG LLP (filed herewith).

23.2	Consent of KPMG LLP (filed herewith).
31.1	Certification pursuant to Rule 13a-14(a) or Rule 15d-14(a) of the Securities Exchange Act of 1934, of Randall C. Stuewe, the Chief Executive Officer of the Company (filed herewith).
31.2	Certification pursuant to Rule 13a-14(a) or Rule 15d-14(a) of the Securities Exchange Act of 1934, of Brad Phillips, the Chief Financial Officer of the Company (filed herewith).
32	Written Statement of Chief Executive Officer and Chief Financial Officer furnished pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (18 U.S.C. Section 1350) (filed herewith).
99.1	Consolidated Financial Statements of Diamond Green Diesel Holdings LLC and Subsidiary for the year ended December 31, 2019 (filed herewith).
101	Interactive Data Files Pursuant to Rule 405 of Regulation S-T: (i) Consolidated Balance Sheets as of December 28, 2019 and December 29, 2018; (ii) Consolidated Statements of Operations for the years ended December 28, 2019, December 29, 2018 and December 30, 2017; (iii) Consolidated Statements of Comprehensive Income for the years ended December 28, 2019, December 29, 2018 and December 30, 2017; (iv) Consolidated Statements of Stockholders' Equity for the years ended December 28, 2019, December 29, 2018 and December 30, 2017; (v) Consolidated Statements of Cash Flows for the years ended December 28, 2019, December 29, 2018 and December 30, 2017; (vi) Notes to the Consolidated Financial Statements.
104	Cover Page Interactive Data File (formated as Inline XBRL and contained in Exhibit 101).
	The Exhibits are available upon request from the Company.

* Management contract or compensatory plan or arrangement.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

DARLING INGREDIENTS INC.

By: /s/ Randall C. Stuewe
Randall C. Stuewe
Chairman of the Board and
Chief Executive Officer

Date: February 25, 2020

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Randall C. Stuewe Randall C. Stuewe	Chairman of the Board and Chief Executive Officer (Principal Executive Officer)	February 25, 2020
/s/ Brad Phillips Brad Phillips	Chief Financial Officer (Principal Financial Officer)	February 25, 2020
/s/ Brenda Snell Brenda Snell	Chief Accounting Officer (Principal Accounting Officer)	February 25, 2020
/s/ Charles Adair Charles Adair	Director	February 25, 2020
/s/ D. Eugene Ewing D. Eugene Ewing	Director	February 25, 2020
/s/ Linda Goodspeed Linda Goodspeed	Director	February 25, 2020
/s/ Dirk Kloosterboer Dirk Kloosterboer	Director	February 25, 2020
/s/ Mary R. Korby Mary R. Korby	Director	February 25, 2020
/s/ Cynthia Pharr Lee Cynthia Pharr Lee	Director	February 25, 2020
/s/ Charles Macaluso Charles Macaluso	Director	February 25, 2020
/s/ Gary W. Mize Gary W. Mize	Director	February 25, 2020
/s/ Michael E. Rescoe Michael E. Rescoe	Director	February 25, 2020
/s/ Nicole M. Ringenberg Nicole M. Ringenberg	Director	February 25, 2020

Principal Office

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Irving, Texas 75038
972.717.0300
www.darlingii.com

Transfer Agent and Registrar
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P.O. Box 505000
Louisville, KY 40233-5002

Overnight correspondence
Computershare
C/O Shareholder Services
462 South 4th Street
Suite 1600
Louisville, KY 40202
www.computershare.com/investor

Independent Auditors
KPMG LLP
2323 Ross Ave., Suite 1400
Dallas, Texas 75201

Annual Meeting
May 5, 2020
10:00 a.m. Central Time
Darling Ingredients Inc.
5601 North MacArthur Blvd.
Irving, Texas 75038

Form 10-K
Darling Ingredients Inc.'s Annual Report on Form10-K is available upon request without charge:
c/o Investor Relations
Darling Ingredients Inc.
5601 North MacArthur Blvd.
Irving, Texas 75038
www.darlingii.com

Directors

Randall C. Stuewe
Chairman and Director
since February 2003

Charles Adair
Director since 2017

D. Eugene Ewing
Director since 2011

Linda Goodspeed
Director since 2017

Dirk Kloosterboer
Director since 2014

Mary R. Korby
Director since 2014

Cynthia Pharr Lee
Director since 2016

Charles Macaluso
Director since 2002

Gary W. Mize
Director since 2016

Michael E. Rescoe
Director since 2017

Nicole M. Ringenberg
Director since 2018

Executive Officers

Randall C. Stuewe
Chief Executive Officer

Brad Phillips
Executive Vice President
Chief Financial Officer

John O. Muse
Executive Vice President
Chief Administrative Officer

Rick A. Elrod
Executive Vice President
Darling U.S. Rendering Operations

Jan van der Velden
Executive Vice President
International Rendering and Specialties

John Bullock
Executive Vice President
Specialty Ingredients
Chief Strategy Officer

Jos Vervoort
Executive Vice President
Rousselot

John F. Sterling
Executive Vice President
General Counsel and Secretary