ANNUAL REPORT | 2019

Our VISION for the FUTURE

NEOGEN® CORPORATION

Dedicated to food and animal safety.

The mission of

Neogen Corporation

is to be the leading company

in the development and marketing

of **solutions** *for food and animal* **safety**

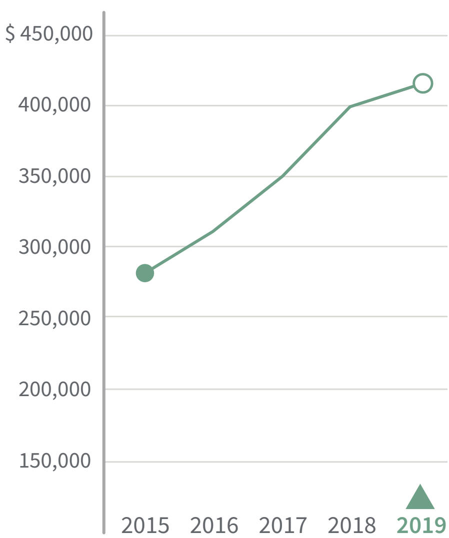
Financial Highlights

Amounts in thousands, except per share

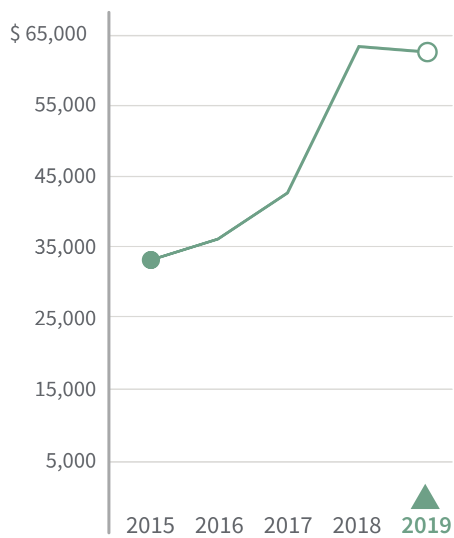
Year Ended May 31	2019	2018	2017	2016	2015
Operations:					
Total Revenues*	$ 414,186	$ 397,930	$ 358,277	$ 317,229	$ 279,901
Food Safety Sales*	213,474	194,477	170,034	145,057	129,876
Animal Safety Sales*	200,712	203,453	188,243	172,172	150,025
Operating Income	68,094	70,194	64,945	56,386	53,118
Net Income Attributable to Neogen	$ 60,176	$ 63,145	$ 43,793	$ 36,564	$ 33,526
Basic Net Income Per Share**	$ 1.16	$ 1.23	$ 0.87	$ 0.73	$ 0.68
Diluted Net Income Per Share**	$ 1.15	$ 1.21	$ 0.86	$ 0.72	$ 0.67
Average Diluted Shares Outstanding**	52,425	52,149	51,165	50,500	49,926

* Revised 2015–2018
** Restated for 2015–2017 due to December 2017 stock split

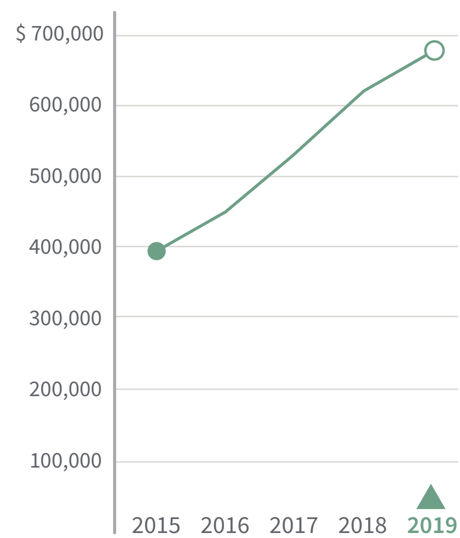
TOTAL REVENUES
Dollars in thousands



NET INCOME
Dollars in thousands



TOTAL ASSETS
Dollars in thousands



In thousands

Year Ended May 31	2019	2018	2017	2016	2015
Financial Strength:					
Cash and Marketable Securities	$ 267,524	$ 210,810	$ 143,635	$ 107,796	$ 114,164
Working Capital	411,278	337,101	256,959	219,628	205,739
Total Assets	695,740	618,009	528,409	449,940	392,181
Long-Term Debt	–	–	–	–	–
Equity	637,899	560,175	471,757	404,161	350,963

A message from our CEO, John Adent

To our stockholders, employees and friends:

Our former CEO often said “jet airplanes don’t have rear view mirrors” to remind ourselves that our stakeholders care much more about where we are going than where we have been.

In this annual report, we detail our vision for Neogen’s 2020 fiscal year and beyond, as we build upon the successes of our past and move into our future.

But, before we look to the future, a few words about how we arrived at where we are today, and where we were in our recently completed 2019 fiscal year.

FY 2019 revenue and net income performance

Revenues for the company for our 2019 fiscal year were $414,186,000, compared to the prior year’s $397,930,000, an increase of 4%. Net income for 2019 was $60,176,000, or $1.15 per share, compared to the prior year’s $63,145,000, or $1.21 per share.

For the year, Neogen was in the same position as other American companies with a substantial percentage of their sales coming from outside the United States. The strong dollar increased our buying power overseas, but hurt our top and bottom lines when the foreign currencies were converted to U.S. dollars. In a neutral currency environment for the year, our sales would have been approximately $8 million higher, and at the bottom line, we would have reported approximately 5.5 cents higher earnings per share for our 2019 fiscal year.

Our fiscal 2019 marked the 28th straight year that Neogen reported revenue increases as compared to the previous year.

Balance sheet remains strong

Our fiscal 2019 was another strong year for us in generating cash and further strengthening our balance sheet. We continue to be debt-free, and we added approximately 14% to shareholder equity during the year. These results allow us to continue to make investments in our business, including the acquisitions of complementary businesses and technology, and infrastructure improvements to solidify our foundation to help drive future growth.

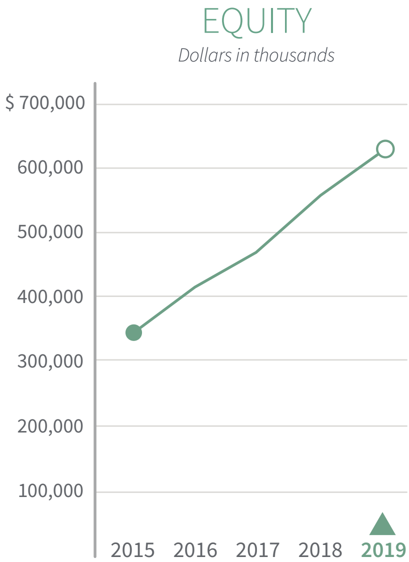
Strength in food safety and genomics business

Our Food Safety business had some impressive results in the year that were driven by both the capture of additional market share with existing products, and greater acceptance in the marketplace of our newer testing technologies. Global sales of our tests to detect natural toxins increased 15%, driven by strong sales of test kits in the U.S., Brazil and Canada. Sales of our tests for aflatoxins were up 21% for the year, as we expanded our market share in key geographies, and grew our new Raptor® test systems worldwide. We continue to gain strong customer acceptance of our Raptor platform as it greatly simplifies the entire testing process.

Our pathogen detection product line also had a strong performance. For the year, we had a 24% increase in global sales of our test kits to detect foodborne pathogens, including *Listeria* and *Salmonella*. This increase was the result of solid sales growth of products utilizing our existing technologies and robust sales for our game-changing *Listeria* Right Now™. The ability to accurately test for *Listeria* in under one hour from the time you take the sample to the time you receive results has delivered tremendous value to our customers.

AccuPoint® Advanced, another of our core Food Safety product lines that tests for environmental sanitation concerns in food and beverage processing facilities, also had strong growth, with revenues increasing 11%. Sales of our test kits to detect food allergens, including gluten, milk, soy and peanuts, also continued to grow, with a 7% increase for the year.

Revenues from our worldwide animal genomics business increased 12% in 2019, largely due to significant increases in



beef and companion animal testing in key global markets, such as the United States, Europe, Brazil and Australia. As with our natural toxin and pathogen products, the increase in our genomics revenue was due to new products and increased market penetration with existing products.

We've had a number of new product developments with our genomics group that have gained almost immediate acceptance with our customers. For example, cattle producers use our improved DNA test to better predict traits their bulls or cows will pass on to their offspring, helping them make more profitable breeding and ranching decisions.

Strength internationally

Despite the currency issues, our international markets performed well for the 2019 fiscal year, with sales up 11% compared to the prior year. For the year, 40.1% of Neogen's total revenues came from international sources, compared to 37.6% in our fiscal 2018.

In U.S. dollars, our revenues from Brazil were up 16% compared to the prior year (36% in local currency), led by increases in sales of aflatoxin test kits, forensic test kits and our genomics services. We recently introduced Neogen's new indicus cattle model for genomics testing, which is specific for the unique breed of cattle in Brazil.

Neogen's flagship international business continues to be our Scotland-based Neogen Europe operations. For the year, revenues for this group were up 8% compared to the prior year in U.S. dollars (12% in local currency). Neogen Europe acts as the distribution center for all European Union countries, as well as some countries in Africa and Eastern Europe. One highlight for our 2019 fiscal year was the integration and harmonization of our culture media operations in the U.K. with those in the U.S.

Our MISSION *truly* MATTERS.

Our Mexico-based operation, which also sells to customers in Central America, showed a nice increase, up 13% for the year (17% in local currency). Food Safety diagnostic test kits in Mexico were up 25% as compared to a year earlier, and our Animal Safety products, such as cleaners and disinfectants, going into Central American countries showed some notable increases. While still small, our China revenues for the year were up about 13% (17% in local currency), and revenues from our operations in India were almost double from a year ago. We have high expectations for growth in these countries in the future as we continue to build out their infrastructures. Revenues from our Australian operation, acquired in September 2017, exceeded our expectations in its first full fiscal year as part of Neogen.

Our vision for the future

The opportunities that exist today have never been better for our overall business. The United Nations forecasts that the world population will increase approximately 25% to 9.7 billion by the year 2050. This population growth will strain the global food supply and require larger production and processing facilities. This means a larger concentration of animals in small areas, bigger and higher speed processing plants, and faster distribution systems. All of these demands increase the likelihood of animal safety concerns and food safety problems.

Neogen has new products in the R&D pipeline that will help address many of the concerns and problems likely to arise. At the same time, continued focus from our sales and marketing teams should allow us to increase market share around the world. We continue to have sufficient cash and access to credit markets to allow us to continue to take advantage of acquisition opportunities as they are identified.

In closing, I would like to thank Jim Herbert for his leadership since founding Neogen in 1982. During Jim's time here, he grew the company from nothing to $400 million in revenues. It's clear that Neogen would not be the company it is today without Jim's tremendous talent, vision and drive. He saw a need for what Neogen could be and he has worked nonstop, tirelessly, to achieve his dream.

In January 2019, we fully completed the CEO transition process that began when I joined the company in July 2017. I'm honored and grateful that Jim and the Board have granted me this opportunity.

Our vision for Neogen's future is clear. We will continue to play a key role in enhancing the safety, quality and quantity of the global food supply for our rapidly growing population. Our mission truly matters — today, tomorrow and into our foreseeable future.

John E. Adent • President and CEO

Our VISION for the FUTURE

Innovative test systems for data-driven decisions. More effective prevention.

Neogen's mission is to become the leading company in the development and marketing of solutions for food and animal safety.

Since its founding in 1982, Neogen has earned its status as a market-leading company in the development and marketing of food safety solutions, including the rapid and accurate detection of natural toxins, allergens, pathogens, spoilage microorganisms, and ATP (for environmental monitoring and control).

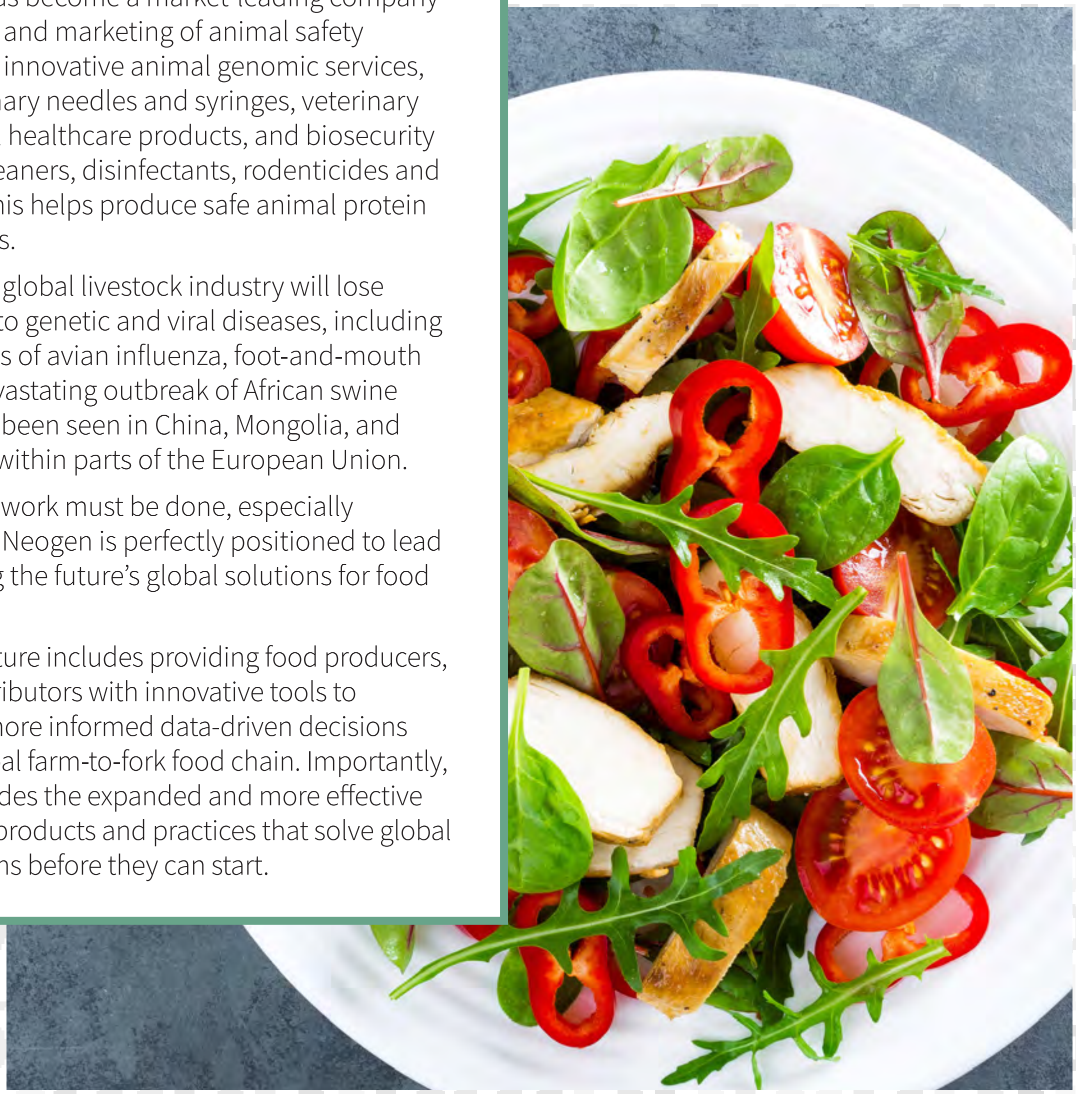
Despite the advancements in food safety practices and testing, a recent report from the United Nation's World Health Organization provided the extent of the challenge still facing the global food industry in 2019. The report stated that every year more than 400,000 people around the world die, and an estimated 600 million people become sick, from the food they eat.

Likewise, Neogen has become a market-leading company in the development and marketing of animal safety solutions, including innovative animal genomic services, cutting-edge veterinary needles and syringes, veterinary instruments, animal healthcare products, and biosecurity products such as cleaners, disinfectants, rodenticides and insecticides. All of this helps produce safe animal protein for our food supplies.

And yet, in 2019 the global livestock industry will lose millions of animals to genetic and viral diseases, including numerous outbreaks of avian influenza, foot-and-mouth disease — and a devastating outbreak of African swine fever that so far has been seen in China, Mongolia, and Vietnam, as well as within parts of the European Union.

Clearly, much more work must be done, especially internationally, and Neogen is perfectly positioned to lead the way in providing the future's global solutions for food and animal safety.

Our vision for the future includes providing food producers, processors and distributors with innovative tools to make quicker and more informed data-driven decisions throughout the global farm-to-fork food chain. Importantly, our vision also includes the expanded and more effective use of preventative products and practices that solve global food supply problems before they can start.



Innovative test systems for data-driven decisions

The continued growth in the fields of biotechnology and computer science has provided food producers and processors with an unprecedented amount of data concerning all aspects of their operations. This rapidly expanding data-creation trend is only likely to continue in the future.

Neogen is positioned to help all of its customers make sense of the new data — and make quicker and more informed data-driven decisions.

Choosing the best animals for breeding programs

For most food products, the data-driven decision-making starts very early in the process. Providing the highest quality and quantity animal protein food products, including meat, milk and eggs, starts with producers selecting the best animals for breeding programs.

Neogen's global animal genomics operations turn a seemingly impossible task of interpreting an animal's genome, which includes billions of nucleotide base pairs, into easily understandable information. For example, cattle producers use Neogen Genomics technology to select the best animals for desirable traits, such as higher milk production, more tender steaks, or better disease resistance. These data-driven decisions result in a food supply that is safer, healthier and more environmentally efficient to produce — and more profitable cattle operations.

Neogen has recently enhanced its ability to serve the global animal genomics market by expanding its animal genomics laboratory services and bioinformatics to include locations in the United States, Scotland, Brazil, Canada, China and Australia. Neogen serves the beef and dairy cattle, pig, sheep and poultry markets, and also provides genomic testing services for aquatic species and even dogs.

In the past year, Neogen also acquired the assets of Livestock Genetic Services, a company that specialized in genetic evaluations and data management for cattle breeding organizations. The acquisition enhances the company's in-house genetic evaluation capabilities, and complements Neogen's unparalleled global network of animal genomics laboratories.

Creating the accurate results needed to protect the food supply chain…

The safety and quality of the global food supply is challenged by contaminants on every step of its journey from inside the farm gate to the dinner plate. Contamination can occur in a farmer's field, such as corn with a mycotoxin, or anywhere in the processing, distribution or retail process, such as with *Listeria*, or a food allergen in a production environment.

Neogen has led the way with the most comprehensive range of easy and accurate food safety tests to provide producers and processors the answers they need to ensure the safety and quality of their products.

Whether food products originate from a ranch, farm, field, orchard, sea, or other location, Neogen's testing products and services continue to help enhance their quantity, quality and safety throughout their processing — whether that process is minimal or extensive.

Neogen offers rapid food safety testing solutions for foodborne bacteria, including *Listeria*, *Salmonella*, and *E. coli*; natural toxins, including aflatoxin, deoxynivalenol (DON) and histamine; food allergens, including gluten, milk and peanuts; spoilage microorganisms, including yeast and mold; drug residues, including antibiotics in milk; and sanitation concerns.

In the past year, sales of the company's *Listeria* Right Now™ test system were almost five times more than the previous year. It appears that food safety testers are accepting that it is possible to accurately test for *Listeria* in under one hour from the time a sample is taken to the time the test delivers results — instead of a day or longer.

Neogen has also recently introduced a portable version of its innovative Raptor® Integrated Analysis Platform that provides the option of performing mycotoxin testing in the laboratory — or wherever a tester may choose. The new Raptor Solo is a battery-operated portable version of the popular Raptor Integrated Analysis Platform. As with the original benchtop version, the new Raptor is a test strip reader that provides an easy way to objectively analyze and store results of Neogen's mycotoxin tests.

Also in the past year, Neogen acquired Clarus Labs, an acquisition that provides the company with greater access to the $400 million global water microbiology testing market. The acquisition included the patented Colitag™ water test, which detects dangerous coliform bacteria (i.e., bacteria normally found in the intestine), including *E. coli*, in water. Colitag also detects coliforms that have been weakened, but not killed, by inadequate water treatment efforts — including microorganisms capable of causing human illness.

…and using the results to make data-driven decisions

Regardless of the Neogen product used to produce accurate test results, those results lead food safety professionals to make decisions that will affect their operations — and potentially their consumers and their bottom lines.

In some cases, test results can lead to easy decisions to protect the safety and quality of food products. For example, if a dairy producer uses a Neogen product to test an incoming load of raw milk for the presence of antibiotics, a positive test will lead the producer to reject the load, and protect the producer's operations from contaminated product.

In other cases, these decisions are not so easy. For example, when a food processor uses Neogen's *Listeria* Right Now to test the processor's production environment and receives a positive test result. Was the detected *Listeria* the result of a persistent problem that must be systematically addressed and remedied by major changes in the processor's operations? Or, was the *Listeria* a transient problem — a temporary issue that is not likely to recur?

Most of Neogen's food safety diagnostics are accompanied by software systems that help testers to objectively analyze and store their results, and perform analysis on the results from multiple locations over extended periods.

The company also provides continual support and follow-up training, utilizing a combination of virtual and on-site training. Neogen's dedicated technical service and field application specialists provide around-the-clock professional technical support should questions arise about one of its products, or their results. Neogen's product lines are also backed by an in-house research and development staff.

In an effort to further assist its food safety diagnostic customers interpret their test result data, Neogen recently signed a development and licensing agreement that will allow Neogen's customers exclusive access to an enhanced version of a risk intelligence platform.

To be marketed under the Neogen Analytics brand, the innovative platform will enable Neogen customers to automate food safety workflows, and continuously monitor and analyze food risk data generated by the company's food safety diagnostic products.

By automating and connecting multiple data points through diagnostic testing in a production facility, the food safety data analytics platform enables food producers and processors to harness their data to create a holistic picture around areas of risk that can guide operational data-driven decisions.

More effective prevention

Of course, the best way to address a problem in the global food supply is to prevent it from happening in the first place. Neogen offers a comprehensive array of proven products that were developed to stop problems before they can start.

Veterinary instruments and animal care products

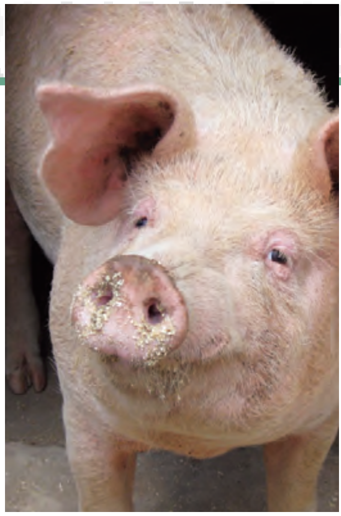
Neogen maintains a leadership role in the development of precision veterinary drug delivery instruments to help minimize drug residues that might otherwise find their way into meat and milk supplies. The company's line of patented detectable D3™ Needles greatly lessen the chance that a broken needle would ever arrive on a dinner plate in a meat product.

Neogen's reproductive and obstetrical veterinary instruments protect animals and their offspring throughout the breeding process, and the company's wide range of veterinary pharmaceuticals and nutritional supplements support animal health.

Biosecurity products

As shown in the recent devastating impact on the global swine industry by outbreaks of African swine fever (ASF), the spread of deadly diseases poses one of biggest threats to the global food supply. The global demand for high quality pork products has resulted in the worldwide movement of pigs and pork products, and as there is no current effective treatment for ASF, good biosecurity measures are vital to contain the spread of disease.

Stopping bacterial, viral, or fungal outbreaks before they can start is a critical goal in food and animal safety. Neogen produces and markets a comprehensive line of agricultural biosecurity products, including rodenticides, insecticides, cleaners and disinfectants, to help protect livestock from the spread of dangerous diseases in large, integrated production facilities.



The company's broad range of disinfectants are formulated to provide the highest quality chemistries and broadest efficacy for use in all types of animal care premises, ranging from production livestock rearing to companion animal veterinary clinics.

Neogen's EPA-approved veterinary disinfectants kill most major pathogens of concern, including bacteria, fungi and viruses and have broad germicidal capabilities to remove infectious agents such as avian influenza, foot and mouth disease, *Aspergillus fumigatus* and porcine reproductive and respiratory syndrome. Neogen also assists its customers with step-by-step procedures to properly clean, and then disinfect, all types of surfaces.

Livestock water safety products

Managing water quality and quantity is one of the most overlooked best management practices in animal safety and health. It plays an important role in digestion and nutrient absorption, and is also essential for optimal growth and production.

Neogen offers an array of effective cleaners and disinfectants to first clean agricultural waterlines, and then treat the water supply to ensure a continuous flow of fresh, healthy water to livestock.

If the United Nations' forecast that the world population will increase to 9.7 billion by 2050 holds true, Neogen's mission to be a leading provider of food and animal safety products and services will matter even more in the future than it does today.

Neogen stands ready with the right mission to provide food producers, processors and distributors with innovative tools to make quicker and more informed data-driven decisions, as well as promote the expanded and more effective use of preventative products and practices.

Management's Discussion and Analysis of Financial Condition and Results of Operations

The information in this Management's Discussion and Analysis of Financial Condition and Results of Operations contains both historical financial information and forward-looking statements. Neogen's management does not provide forecasts of future financial performance. While we are optimistic about our long-term prospects, historical financial information may not be indicative of our future financial results.

Any statements contained herein that are not statements of historical fact may be deemed to be forward-looking statements. Without limiting the foregoing, the words "believes," "anticipates," "plans," "expects," "seeks," "estimates," and similar expressions are intended to identify forward-looking statements. There are a number of important factors, including competition, recruitment and dependence on key employees, impact of weather on agriculture and food production, identification and integration of acquisitions, research and development risks, patent and trade secret protection, government regulation and other risks detailed in item 1A. RISK FACTORS in this Form 10-K and from time to time in the Company's reports on file at the Securities and Exchange Commission, that could cause Neogen Corporation's results to differ materially from those indicated by such forward-looking statements, including those detailed in this "Management's Discussion and Analysis of Financial Condition and Results of Operations."

In addition, any forward-looking statements represent management's views only as of the day this Form 10-K was first filed with the Securities and Exchange Commission and should not be relied upon as representing management's views as of any subsequent date. While we may elect to update forward-looking statements at some point in the future, we specifically disclaim any obligation to do so, even if our views change.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

The discussion and analysis of our financial condition and results of operations are based on the consolidated financial statements that have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of these financial statements requires that management make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosure of contingent assets and liabilities. On an ongoing basis, management evaluates the estimates, including but not limited to, those related to receivable allowances, inventories and intangible assets. These estimates are based on historical experience and on various other assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

The following critical accounting policies reflect management's more significant judgments and estimates used in the preparation of the consolidated financial statements.

Revenue Recognition

In May 2014, the FASB issued ASU No. 2014-09 — Revenue from Contracts with Customers (Topic 606). The new standard outlines a single comprehensive model for entities to use in accounting for revenue arising from contracts with customers and supersedes most current revenue recognition guidance, including industry-specific guidance. The core principle of the revenue model is that an entity should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. The standard is designed to create greater comparability for financial statement users across industries and jurisdictions and also requires enhanced disclosures. In April 2016, the FASB issued Accounting Standards Update No. 2016-10 — Revenue from Contracts with Customers (Topic 606), which amends and adds clarity to certain aspects of the guidance set forth in ASU 2014-09 related to identifying performance obligations and licensing. The guidance became effective for the Company on June 1, 2018. We adopted this standard using the full retrospective approach. This approach was chosen to provide appropriate comparisons against our prior year financial statements; accordingly, historical information for the years ended May 31, 2018 and 2017 has been adjusted to conform to the new standard. See Revenue Recognition section of Note 1 to the consolidated financial statements for further discussion.

Accounts Receivable Allowance

Management attempts to minimize credit risk by reviewing customers' credit history before extending credit and by monitoring credit exposure on a regular basis. An allowance for doubtful accounts receivable is established based upon factors surrounding the credit risk of specific customers, historical trends and other information. Collateral or other security is generally not required for accounts receivable. Once a receivable balance has been determined to be uncollectible, that amount is charged against the allowance for doubtful accounts.

Inventory

A reserve for obsolete and slow-moving inventory has been established and is reviewed at least quarterly based on an analysis of the inventory, considering the current condition of the asset as well as other known facts and future plans. The reserve required to record inventory at lower of cost or net realizable value may be adjusted as conditions change. Product obsolescence may be caused by shelf-life expiration, discontinuance of a product line, replacement products in the marketplace or other competitive situations.

Goodwill and Other Intangible Assets

Goodwill represents the excess purchase price over fair value of tangible net assets of acquired businesses after amounts are allocated to other identifiable intangible assets. Other intangible assets include customer relationships, trademarks, licenses, trade names, covenants not-to-compete and patents. Customer relationship intangibles are amortized on either an accelerated or straight-line basis, reflecting the pattern in which the economic benefits are consumed, while all other amortizable intangibles are amortized on a straight-line basis; intangibles are generally amortized over 5 to 25 years. We review the carrying amounts of goodwill and other non-amortizable intangible assets annually, or when indications of impairment exist, to determine if such assets may be impaired by performing a quantitative assessment. If the carrying amounts of these assets are deemed to be less than fair value based upon a discounted cash flow analysis and comparison to comparable EBITDA multiples of peer companies, such assets are reduced to their estimated fair value and a charge is made to operations.

Long-lived Assets

Management reviews the carrying values of its long-lived assets to be held and used, including definite-lived intangible assets, for possible impairment whenever events or changes in business conditions warrant such a review. The carrying value of a long-lived asset is considered impaired when the anticipated separately identifiable undiscounted cash flows over the remaining useful life of the asset indicate that the carrying amount of the asset may not be recoverable. In such an event, fair value is determined using discounted cash flows and, if lower than the carrying value, impairment is recognized through a charge to operations.

Equity Compensation Plans

Share options awarded to employees and shares of stock awarded to employees under certain stock purchase plans are recognized as compensation expense based on their fair value at grant date. The fair market value of options granted under our stock option plans was estimated on the date of grant using the Black-Scholes option pricing model with assumptions for inputs such as interest rates, expected dividends, volatility measures and specific employee exercise behavior patterns based on statistical data. Some of the inputs used are not market-observable and have to be estimated or derived from available data. Use of different estimates may produce different option values, which in turn would result in higher or lower compensation expense recognized.

To value options, several recognized valuation models exist. None of these models can be singled out as being the best or most correct one. The model applied by us can handle most of the specific features included in the options granted, which is the reason for its use. If a different model were used, the option values could differ despite using the same inputs. Accordingly, using different assumptions coupled with using a different valuation model could have a significant impact on the fair value of employee stock options. Fair value could be either higher or lower than the number provided by the model applied and the inputs used. Further information on our equity compensation plans, including inputs used to determine the fair value of options, is disclosed in Notes 1 and 5 to the consolidated financial statements.

Income Taxes

We account for income taxes using the asset and liability method. Under this method, deferred income tax assets and liabilities are determined based on differences between the financial reporting and tax bases of assets and liabilities and for tax credit carryforwards and are measured using the enacted tax rates in effect for the years in which the differences are expected to reverse. Deferred income tax expense represents the change in net deferred income tax assets and liabilities during the year.

Our wholly-owned foreign subsidiaries are comprised of Neogen Europe, Lab M Holdings, Quat-Chem, Neogen do Brasil, Rogama Industria e Comercio Ltda, Neogen Latinoamérica, Neogen Bio-Scientific Technology Co (Shanghai), Neogen Food and Animal Security (India), Neogen Canada, and Neogen Australasia Pty Limited. Based on historical experience, as well as our future plans, earnings from these subsidiaries are expected to be re-invested indefinitely for future expansion and working capital needs. Furthermore, our domestic operations have historically produced sufficient operating cash flow to mitigate the need to remit foreign earnings. On an annual basis, we evaluate the current business environment and whether any new events or other external changes might require a re-evaluation of the decision to indefinitely re-invest foreign earnings. At May 31, 2019, unremitted earnings of our foreign subsidiaries were $55,553,000.

On December 22, 2017, the Tax Cuts and Jobs Act of 2017 (U.S. Tax Act) was signed into law making significant changes to the Internal Revenue Code. Changes include a federal corporate tax rate reduced from 35% to 21% for tax years beginning after December 31, 2017, the transition of U.S. international taxation from a worldwide tax system to a territorial system, and a one-time transition tax on the mandatory deemed repatriation of foreign earnings. The U. S. Tax Act also includes a provision to tax global intangible low-taxed income (GILTI) of foreign subsidiaries and a deduction for foreign derived intangible income (FDII), both of which became effective for us beginning June 1, 2018. See Note 6 to the consolidated financial statements for further information.

Management's Discussion and Analysis of Financial Condition and Results of Operations

RESULTS OF OPERATIONS

Executive Overview

- Consolidated revenues were $414.2 million in fiscal 2019, an increase of 4% compared to $397.9 million in fiscal 2018. Organic sales increased 3%.
- Food Safety segment sales were $213.5 million in fiscal 2019, an increase of 10% compared to $194.5 million in fiscal 2018. Organic sales increased 9%, with the acquisition of Clarus Labs, in August 2018, contributing the remainder of the growth.
- Animal Safety segment sales were $200.7 million in fiscal 2019, a decrease of 1% compared to $203.5 million in fiscal 2018. Organic sales decreased 2%, with the acquisitions of Neogen Australasia (September 2017), Livestock Genetic Services (September 2018) and Delta Genomics (January 2019) partially offsetting the decrease.
- International sales were 40.1% of total sales in fiscal 2019 compared to 37.6% of total sales in fiscal 2018.
- Our effective tax rate was 17.5% in fiscal 2019 compared to an effective tax rate of 14.0% in fiscal 2018.
- Net income was $60.2 million, or $1.15 per diluted share, a decrease of 5% compared to $63.1 million, or $1.21 per share, in the prior year.
- Cash generated from operating activities in fiscal 2019 was $63.8 million, compared to $69.1 million in fiscal 2018.

Neogen's results reflect an 11% increase in international sales in fiscal 2019 compared to the prior year. We continue to focus on increasing our presence and market share throughout the world, while also integrating recent international acquisitions into our product portfolio. Sales increases for fiscal 2019 compared to the prior year are as follows for each of our international locations:

	Revenue % Increase/(Decrease) USD	Revenue % Increase/(Decrease) Local Currency
Neogen Europe (including Lab M & Quat-Chem)	8%	12%
Neogen do Brasil (including Deoxi & Rogama)	16%	36%
Neogen Latinoamérica	13%	17%
Neogen China	13%	17%
Neogen India	71%	86%
Neogen Australasia	122%	150%
Neogen Canada	(11)%	(7)%

Currency translation had a negative impact of approximately $8.0 million on revenues recorded in foreign currencies during fiscal 2019, as the U.S. dollar strengthened against all the currencies in the countries in which we conduct business. The revenue increase in Europe was led by a 14% increase in sales of genomics services, primarily in the porcine and bovine markets. Deoxynivalenol (DON) test kit sales also increased 19% due to increased testing after a DON outbreak in France's wheat crops in the fall of calendar 2018. Sales at Quat-Chem increased 17%, due to increased sales coverage and the introduction of new products into their markets.

After adjusting for a 15% devaluation of the real against the dollar, sales in Brazil increased 16%, led by a 90% increase in sales of natural toxins test kits, as we gained significant new business from customers testing for the presence of aflatoxin in corn. Sales of forensic test kits, used for required drug testing of commercial drivers in Brazil, increased significantly due to business that shifted from U.S. labs to labs in Brazil and increased demand from commercial laboratories located in Brazil. Neogen Latinoamérica grew revenues by 13%, with gains across most product lines, in particular mycotoxins and culture media, and increased sales in both Mexico and Central America.

Service revenue, which consists primarily of genomics services to animal protein and companion animal markets, was $74.7 million in fiscal 2019, an increase of 12% over prior fiscal year sales of $66.6 million, aided by the acquisitions of Neogen Australasia (September 2017), Livestock Genetics (September 2018) and Delta Genomics (January 2019); service revenues increased 9% organically. The growth was led by increases in sample volumes from the global beef and companion animal markets and porcine and bovine markets in Europe.

Revenues

	Year Ended				
(Dollars in thousands)	May 31, 2019	Increase/ (Decrease)	May 31, 2018	Increase/ (Decrease)	May 31, 2017
Food Safety:					
Natural Toxins, Allergens & Drug Residues	$ 78,373	7%	$ 72,962	3%	$ 70,926
Bacterial & General Sanitation	41,966	10%	38,156	10%	34,706
Culture Media & Other	49,857	13%	44,271	12%	39,367
Rodenticides, Insecticides & Disinfectants	25,584	7%	23,821	75%	13,620
Genomics Services	17,694	16%	15,267	34%	11,415
	213,474	10%	194,477	14%	170,034
Animal Safety:					
Life Sciences	7,858	(25)%	10,411	7%	9,704
Veterinary Instruments & Disposables	44,582	(7)%	47,749	15%	41,693
Animal Care & Other	29,941	(3)%	30,930	11%	27,891
Rodenticides, Insecticides & Disinfectants	66,389	(2)%	67,646	(3)%	69,429
Genomics Services	51,942	11%	46,717	18%	39,526
	200,712	(1)%	203,453	8%	188,243
Total Revenue	$ 414,186	4%	$ 397,930	11%	$ 358,277

Year Ended May 31, 2019 Compared to Year Ended May 31, 2018

FOOD SAFETY:

Natural Toxins, Allergens & Drug Residues – Sales in this category increased 7% in fiscal 2019 compared to the prior year. For the natural toxins and allergens product lines, test kit sales increased 15% and 7%, respectively, for the year. The natural toxin increase was due to new business earned in Brazil for aflatoxin test kits, and higher sales of deoxynivalenol (DON) test kits in the U.S. and France, the result of mild outbreaks. These increases were partially offset by a 5% decrease in sales of drug residues test kits, due to lower demand in Europe.

Bacterial & General Sanitation – Sales in this category increased 10% in fiscal 2019 compared to the prior year. Sales of test kits to detect pathogens increased 24%, as we continued to gain new business with our *Listeria* Right Now test kit that launched in fiscal 2018. Sales of our AccuPoint sanitation monitoring product line increased 11%, with samplers up 13%, as we increased our market share. Sales of products to detect spoilage organisms in foods increased 3%.

Culture Media & Other – Sales in this category increased 13% in fiscal 2019 compared to fiscal 2018. Sales of Neogen Culture Media, formerly marketed as the Acumedia and Lab M brands, increased 7%, aided in part by the August 2018 acquisition of Clarus Labs, which consists of the Colitag product and reports in the culture media product line. Excluding new business from the acquisition, sales in the Neogen Culture Media product line increased 4%. This category also includes forensic test kits sold within Brazil, which increased significantly as business shifted from labs in the U.S. in the prior year (reported in the Animal Safety segment) to labs in Brazil and increased demand from commercial laboratories in that country.

Rodenticides, Insecticides & Disinfectants – Revenues of products in this category sold through our Food Safety operations increased 7% in fiscal 2019. This category was led by increases in sales of cleaners and disinfectants to customers in Europe, China and India, partially offset by lower sales of insecticides in Brazil due to a large government tender in fiscal 2018 which did not recur in fiscal 2019.

Genomics Services – Sales of genomics services sold through our Food Safety operations increased 16% in fiscal 2019 compared to the same period in the prior year, primarily due to higher sales in the European porcine and bovine markets. We also benefitted from a large, non-recurring research project with the Brazilian government, and the commercialization of a new service offering for a type of cattle specific to the Brazilian market.

ANIMAL SAFETY:

A high proportion of the Animal Safety products are marketed and sold through our veterinary distributor network; this channel was soft in 2019, with sluggish end market demand, caused in part by increased tariffs and political uncertainties in our markets. We were also negatively impacted by inventory destocking at our largest distributor partners.

Life Sciences – Sales in this category decreased 25% in fiscal 2019 compared to the same period in the prior year, as approximately $2.4 million of forensic test kit revenues shifted to our operations in Brazil, which are reported in the Food Safety segment. This testing was performed by commercial labs in the U.S. in the prior fiscal year, but has since moved to commercial labs located in Brazil.

Veterinary Instruments & Disposables – Revenues in this category decreased 7% in fiscal 2019 compared to fiscal 2018. Protective wear and consumables decreased 17%, resulting from poor economic conditions in the commercial dairy production market. Veterinary instruments sales were down 4% for the year, however, this product line had a very strong increase in fiscal 2018, with sales up 23% in that period compared to the prior year. A 19% decline in detectable needles was partially offset by strong increases in disposable syringes and aluminum and poly hub needles.

Animal Care & Other – Sales of these products decreased 3% in fiscal 2019. Wound care and injectable vitamin products were down 13% and 6%, respectively, due to inventory destocking at distributors; dairy supplies that we distribute were down 5%, due to poor economic conditions in the commercial dairy production market. Additionally, we spent more on promotional programs and rebates with distributors, which are recorded as contra revenues within this category, in fiscal 2019 than in the prior year. Partially offsetting these losses were a 12% increase in sales of our biologics product line and a 7% increase in supplements and other care products, both due to increased demand from end customers in the companion animal and equine markets.

Rodenticides, Insecticides & Disinfectants – Sales in this category decreased 2% in fiscal 2019, compared to the same period in the prior year. The decrease was due primarily to the full year impact of toll manufacturing business lost in the third quarter of fiscal year 2018. Additionally, rodenticide sales declined due to poor weather conditions causing lower demand and a weak U.S. animal protein market partially caused by tariff issues.

Genomics Services – Sales in this category increased 11% in fiscal 2019, aided by the acquisitions of Neogen Australasia (September 2017), Livestock Genetics (September 2018) and Delta Genomics (January 2019); organic growth in this category was 7%. Strong growth in the beef cattle and companion animal markets was partially offset by revenue decreases in U.S. poultry and porcine markets, despite increases in sample volumes, resulting from a shift to lower priced chips and services. Additionally, poor economic conditions in the U. S. commercial dairy production market resulted in lower revenues from that market.

Year Ended May 31, 2018 Compared to Year Ended May 31, 2017

FOOD SAFETY:

Natural Toxins, Allergens & Drug Residues – Sales in this category increased 3% in fiscal 2018 compared to the prior year. For the allergens and dairy drug residues product lines, test kit sales increased 12% and 13%, respectively, for the year. These increases were partially offset by a 26% decrease in sales of deoxynivalenol (DON) test kits, as prior year outbreaks of DON in corn crops in the U.S., Canada and Europe did not recur in fiscal 2018.

Bacterial & General Sanitation – Sales in this category increased 10% in fiscal 2018, led by strong sales of our AccuPoint sanitation monitoring product line which increased 18% on strength in both reader equipment and consumable supplies. Sales of test kits to detect pathogens increased 16%, led by growth in Listeria products, including our new Listeria Right Now test kit that launched earlier in the fiscal year. Additionally, sales of our product line to detect spoilage organisms in processed foods increased 2%.

Culture Media & Other – Sales in this category increased 12% in fiscal 2018 compared to fiscal 2017. Sales of Neogen Culture Media, formerly marketed as the Acumedia and Lab M brands, increased 19%, due to continued strength in products manufactured at Lab M in the U.K. and a large non-recurring order from a U.S. customer. This category also includes sales of forensic test kits sold through our Brazilian subsidiary, which decreased by 39% in fiscal 2018. Demand in fiscal 2017 was extremely high, due to a new requirement for drug testing of commercial truck drivers, however, sales of these kits in Brazil have decreased in fiscal 2018 due to increased competition and customer losses caused by conversion to different testing methods.

Rodenticides, Insecticides & Disinfectants – Sales of products in this category sold through our Food Safety operations increased 75% in fiscal 2018; excluding the December 2016 acquisitions of Quat-Chem and Rogama, organic growth was 2%. The increase was primarily due to a nonrecurring large sale of insecticides by Rogama to a government health organization. Cleaner and disinfectants sold through Food Safety operations were negatively impacted by termination of a distribution agreement in January 2017, which resulted in a decline in sales for those distributed products of $859,000 in fiscal 2018.

Genomics Services – Sales of genomics services sold through our Food Safety operations increased 34% in fiscal 2018 compared to the same period in the prior year, primarily due to market share increases, particularly in the beef and dairy cattle markets, and incremental business with a large poultry producer, in Europe.

ANIMAL SAFETY:

Life Sciences – Sales in this category increased 7% in fiscal 2018 compared to fiscal 2017, due to increased volumes of forensic test kits sold to commercial labs in the U.S.

Veterinary Instruments & Disposables – Revenues in this category increased 15% in fiscal 2018, led by a 20% increase in sales of syringes, as we gained new customers in the retail and custom solutions markets. Sales of our patented detectable needles increased 23%, aided by strong sales to customers in Europe, including Russia.

Animal Care & Other – Sales of these products increased 11% in fiscal 2018, due to higher sales of PanaKare, our pancreatic replacement therapy, which benefitted from competitor backorders in fiscal 2018. Additionally, results from fiscal 2017 included sales credits totaling $1.1 million in the first quarter as we removed our canine thyroid product from the market, after the FDA approved a new drug application for a competitive product.

Rodenticides, Insecticides & Disinfectants – Sales in this category decreased 3% in fiscal 2018, compared to the same period in the prior year. The January 2017 termination of a distribution agreement with a manufacturer of cleaners and disinfectants resulted in lost sales of those distributed products totaling $4.7 million within this category. Partially offsetting this loss, sales of rodenticides increased 11% due to market share gains in the U.S.

Genomics Services – Sales in this category increased 18% in fiscal 2018; excluding the September 2017 acquisition of Neogen Australasia, organic growth was 11%. The growth was led by increases in sales to the global beef and dairy cattle and companion animal markets and higher volumes from a large poultry customer.

Cost of Revenues

(Dollars in thousands)	2019	Increase	2018	Increase	2017
Cost of Revenues	$ 222,266	5%	$ 211,658	12%	$ 189,353

Cost of revenues increased 5% in fiscal 2019 and 12% in fiscal 2018 in comparison with the prior years. This compares with revenue increases of 4% in fiscal 2019 and 11% in fiscal 2018. Expressed as a percentage of sales, cost of revenues was 53.7%, 53.2% and 52.9% in fiscal years 2019, 2018 and 2017, respectively.

Fiscal 2019 – Both Food Safety and Animal Safety margins decreased in fiscal 2019, primarily due to a product mix shift towards lower margin products within each segment, and to a lesser extent, the strength of the U.S. dollar, which rose against all of the currencies in the countries in which we operate, and resulted in higher cost of sales in our international operations, which pay for their inventory in U.S. dollars. A higher overall proportion of Food Safety revenues, which have higher than average gross margins, partially offset the lower margins within each segment.

Fiscal 2018 – Improvements in Animal Safety gross margins, resulting from raw material cost reductions and favorable mix were offset by higher product costs in the Food Safety segment resulting from lower sales of our mycotoxin test kits, which have higher gross margins, and a change in mix caused by the Quat-Chem and Rogama acquisitions. These businesses have product lines with gross margins lower than the average gross margins in this segment. Depreciation expense, resulting from the investment of machinery and equipment at several manufacturing locations, increased $872,000 in fiscal 2018.

Food Safety Gross Margins:

Food Safety gross margins were 51.8%, 52.4% and 55.0% in fiscal years 2019, 2018 and 2017, respectively.

Fiscal 2019 – Food Safety gross margins decreased 60 basis points in fiscal 2019, primarily the result of a shift in product mix at our international operations; in fiscal 2019, these operations sold a higher proportion of lower margin traditional Animal Safety products such as cleaners and disinfectants. In addition, gross margins were also negatively impacted by the strength of the U.S. dollar relative to the international currencies in which we operate, particularly in Brazil, Europe, and Mexico, where the real, pound and peso declined in value against the U.S. dollar by 15%, 3%, and 4%, respectively. These international operations report through the Food Safety segment. Increases in higher margin product lines such as our diagnostic and forensic test kits partially offset these decreases.

Fiscal 2018 – Our fiscal 2018 results reflect the full year impact of lower gross margins from revenues contributed by the recent acquisitions of Quat-Chem and Rogama. Excluding these businesses, Food Safety gross margins would have been 330 basis points higher in fiscal 2018. Additionally, the decrease in sales of higher margin forensic test kits through our Brazilian subsidiary, due to increased competition, and lower sales of mycotoxin test kits, due to a DON outbreak in the prior year which did not recur in fiscal 2018, adversely impacted gross margins in this segment.

Animal Safety Gross Margins:

Animal Safety gross margins were 40.6%, 41.4% and 40.1% in fiscal years 2019, 2018 and 2017, respectively.

Fiscal 2019 – Animal Safety gross margins decreased 80 basis points in fiscal 2019, primarily the result of lower volumes in higher margin products such as diagnostics, animal care products, instruments and rodenticides. Forensic test kit revenues in Animal Safety declined as a large U.S. commercial laboratory transferred sample testing to its locations in Brazil, which we service through our Brazilian operation, reporting in the Food Safety segment. We also had strong growth in sales of genomics services in our Australian operations; gross margins in this operation are lower than historical Animal Safety margins due to higher chip costs and lack of scale. Partially offsetting these lower margins were increased margins in the U.S. genomics operations, based primarily on improved input costs and increased sales of higher margin services to the bovine and companion animal markets.

Fiscal 2018 – The improvement in gross margin percentage from fiscal 2017 to fiscal 2018 was primarily due to raw material cost reductions in our genomics business. We also benefitted from increased sales of forensic test kits and other higher margin products and decreased sales of lower margin distributed cleaners and disinfectants resulting from the termination of a distribution agreement in January 2017.

Operating Expenses

(Dollars in thousands)	2019	Increase	2018	Increase	2017
Sales and Marketing	$ 70,230	5%	$ 66,929	13%	$ 59,380
General and Administrative	40,791	7%	38,294	12%	34,214
Research and Development	12,805	18%	10,855	5%	10,385
Total Operating Expense	$ 123,826	7%	$ 116,078	12%	103,979

Overall operating expenses increased by 7% in fiscal 2019 and 12% in fiscal 2018, each compared to the prior year. These increases compare to revenue increases of 4% and 11%, respectively, in each comparative period.

Sales and Marketing:

Sales and marketing expenses increased by 5% in fiscal 2019 and 13% in fiscal 2018, each compared to the prior year. As a percentage of sales, sales and marketing expense was 17.0%, 16.8% and 16.6% in fiscal years 2019, 2018 and 2017, respectively.

Fiscal 2019 – Salaries and commissions increased by 4% in 2019, and drove the 5% increase in overall sales and marketing expenses; shipping expenses increased 11%, the result of higher rates and an increase in air shipments. Other increases were the result of higher trade show, exhibit and sponsorship costs, and provision for bad debts. Partially offsetting these increases were lower promotion and consulting expenses.

Fiscal 2018 – Salaries and commissions expense rose 9% in fiscal 2018, while travel expense increased 12%. Other significant increases include shipping expense, distributor support and promotion programs, federal and state product registrations and royalty expense. Approximately $1.2 million of the increase in sales and marketing expense resulted from the Quat-Chem, Rogama and Neogen Australasia acquisitions.

General and Administrative:

General and administrative expenses rose 7% in fiscal 2019 compared to fiscal 2018 and by 12% in fiscal 2018 compared to fiscal 2017. As a percentage of sales, general and administrative expense was 9.8%, 9.6% and 9.5% in fiscal years 2019, 2018 and 2017, respectively.

Fiscal 2019 – Higher salary and stock-based compensation costs were the primary drivers of the overall 7% expense increase. In addition, higher depreciation and license fees on IT-related hardware and software investments, increased training, recruiting and legal fees contributed to the increased expense. These increases were somewhat offset by a $427,000 reduction in amortization expense, as certain intangible assets from past acquisitions were fully amortized during the year.

Fiscal 2018 – The 12% increase was primarily the result of higher salaries, due to additional headcount as well as compensation increases. Higher legal and professional fees and additional amortization of intangible assets, due to our recent acquisitions, also contributed to the increase compared to fiscal 2017.

Research and Development:

Research and development expenses increased 18% in fiscal 2019 and 5% in fiscal 2018, each compared to the prior year. As a percentage of revenue, these expenses were 3.1% in fiscal year 2019, 2.7% in fiscal year 2018 and 2.9% in fiscal year 2017; we expect to spend approximately 3% of total revenue on research and development annually.

Fiscal 2019 – The 18% increase in research and development expenses in fiscal 2019 was primarily the result of development spending for next generation products and increases in expenditures to obtain regulatory approvals for a number of new products. Higher salaries expense, resulting from increased headcount and compensation increases, and increased depreciation expense, resulting from investments in analytical and testing equipment, accounted for the remainder of the increase.

Fiscal 2018 – In fiscal 2018, higher compensation costs were partially offset by lower levels of consulting and other outside services.

Operating Income

(Dollars in thousands)	2019	Increase	2018	Increase	2017
Operating Income	$ 68,094	(3)%	$ 70,194	8%	$ 64,945

Our operating income decreased by 3% in fiscal 2019 compared to fiscal 2018, and increased by 8% in fiscal 2018 compared to fiscal 2017. Expressed as a percentage of revenues, operating income was 16.4%, 17.6% and 18.1% in fiscal years 2019, 2018 and 2017, respectively.

The 3% decrease in operating income for fiscal 2019 was due primarily to overall operating expense increases of $7.7 million, up 7%, which compared to a gross margin increase of $5.6 million.

The 8% increase in operating income for fiscal 2018 was due to the 11% increase in sales, offset by slightly lower gross margins due to product mix shifts, and operating expenses which rose by 12% over fiscal 2017.

Other Income (Expense)

Other Income (Expense) for the previous three fiscal years consisted of the following:

(Dollars in thousands)	2019	2018	2017
Interest income (net of expense)	$ 4,683	$ 2,043	$ 838
Foreign currency transactions	(1,279)	274	(40)
Royalty income	150	147	171
Licenses and insurance settlements	672	360	660
Quat-Chem contingent consideration	422	255	–
Deoxi contingent consideration	(10)	(42)	(14)
Neogen India contingent consideration	–	–	32
Other	227	234	81
Total Other Income (Expense)	**$ 4,865**	**$ 3,271**	**$ 1,728**

The increase in interest income in fiscal years 2019 and 2018, each compared to the prior year, is the result of higher cash balances and rising interest rates during the two-year period. The loss from foreign currency translations in fiscal 2019 is primarily the result of the changes in the value of foreign currencies relative to the U.S. dollar in countries in which we operate; the dollar strengthened against all of these currencies in 2019. In fiscal 2019 and 2018, gains were recognized on insurance proceeds received for property loss settlements; in fiscal 2017, we terminated a licensing agreement and recognized a gain of $660,000. Other Income in fiscal 2019 and 2018 included the adjustment of Quat-Chem and Deoxi contingent consideration based on the level of achievement of revenue targets for the acquired businesses in each of those fiscal years.

Provision for Income Taxes

(Dollars in thousands)	2019	Increase	2018	Increase	2017
Provision for Income Taxes	$ 12,783	25%	$ 10,250	(55)%	$ 22,700

Income tax expense for fiscal 2019 was $12.8 million, an effective tax rate of 17.5%, compared to income tax expense of $10.3 million in 2018, an effective tax rate of 14.0%. For fiscal 2017, income tax expense of $22.7 million represented an effective tax rate of 34.0%.

The U.S. Tax Act reduced the statutory income tax rate from 35% to 21% in December 2017. During fiscal 2019, we utilized the 21% statutory rate for the entire year to compute our income tax expense, whereas the statutory rate in fiscal 2018 was a blended rate of 29.2% and fiscal 2017 was calculated using the previous statutory rate of 35%.

Differences from the U. S. statutory rate to our effective rate are primarily due to provisions in the U.S. Tax Act and the exercise of stock options. Please refer to Note 6 to the consolidated financial statements for more information.

Net Income and Income Per Share

(Dollars in thousands—except per share data)	2019	Increase	2018	Increase	2017
Net Income Attributable to Neogen	$ 60,176	(5)%	$ 63,145	44%	$ 43,793
Net Income Per Share—Basic	1.16		1.23		0.87
Net Income Per Share—Diluted	1.15		1.21		0.86

Net income decreased by 5% in fiscal 2019 as compared to fiscal 2018. This is due to the increase in our effective tax rate in fiscal 2019 and, to a lesser extent, a 1% decrease in pre-tax income.

Net income increased by 44% in fiscal 2018, significantly aided by U.S. tax reform enacted in December 2017 and a change in accounting for stock-based compensation.

Future Operating Results

Neogen Corporation's future operating results involve a number of risks and uncertainties. Actual events or results may differ materially from those discussed in this report. Factors that could cause or contribute to such differences include, but are not limited to, the factors discussed below as well as those discussed elsewhere in this report. Management's ability to grow the business in the future depends upon our ability to successfully implement various strategies, including:

- developing, manufacturing and marketing new products with new features and capabilities, and having those new products successfully accepted in the marketplace;
- expanding our markets by fostering increased use of our products by customers;
- maintaining or increasing gross and net operating margins in changing cost environments;
- strengthening operations and sales and marketing activities in geographies outside of the U.S.;
- developing and implementing new technology development strategies; and
- identifying and completing acquisitions that enhance existing product categories or create new products or services.

FINANCIAL CONDITION AND LIQUIDITY

On May 31, 2019, we had $41.7 million in cash and cash equivalents, $225.8 million in marketable securities and working capital of $411.3 million. For the year ended May 31, 2019, cash generated from operating activities was $63.8 million, compared to $69.1 million generated in fiscal 2018; proceeds from stock option exercises provided an additional $17.0 million of cash. For the same period, additions to property and equipment were $14.7 million and business acquisitions used cash of $6.4 million. We have a financing agreement with a bank providing for an unsecured revolving line of credit of $15.0 million, which was amended in November 2018 to extend the expiration to September 30, 2021. There were no advances against this line of credit during fiscal years 2019, 2018 and 2017, and no balance outstanding at May 31, 2019 and 2018.

Accounts receivable at May 31, 2019 were $82.6 million, compared to $79.1 million at May 31, 2018; the increase is primarily due to the increase in revenues. Days sales outstanding, a measurement of the time it takes to collect receivables, was 61 days at May 31, 2019 compared to 60 days at May 31, 2018. All customer accounts are actively managed and no losses in excess of amounts reserved are currently expected.

Inventory balances were $86.0 million at May 31, 2019, an increase of $10.0 million, or 13%, compared to $76.0 million at May 31, 2018. During fiscal 2019, we increased inventory levels of products that are sold into our European markets, to enhance our ability to serve these markets in the event of a disorderly Brexit. While Brexit has been postponed to October 2019, we will continue to monitor and adjust our inventory levels as necessary. Excluding the impacts of the increase related to Brexit, inventory levels rose 8%. All operations are participating in programs to improve inventory turns in fiscal 2020, while ensuring adequate safety stocks to minimize backorders.

Neogen has been consistently profitable and has generated strong cash flow from operations during each of the past three fiscal years. However, our cash on hand and current borrowing capacity may not be sufficient to meet our cash requirements to commercialize products currently under development or our future plans to acquire additional businesses, technology and products that fit within our strategic plan. Accordingly, we may be required, or may choose, to issue equity securities or enter into other financing arrangements for a portion of our future capital needs.

We are subject to certain legal and other proceedings in the normal course of business that have not had, and, in the opinion of management, are not expected to have, a material effect on our results of operations or financial position.

Contractual Obligations

As of May 31, 2019, we have the following contractual obligations due by period:

(Dollars in thousands)	**Total**	Less than one year	1–3 years	3–5 years	More than 5 years
Long-Term Debt	**$ –**	$ –	$ –	$ –	$ –
Operating Leases	**2,320**	1,112	1,106	102	–
Unconditional Purchase Obligations [1]	**54,583**	50,410	3,231	934	8
	$ 56,903	$ 51,522	$ 4,337	$ 1,036	$ 8

[1] Unconditional purchase obligations are primarily purchase orders for future inventory and capital equipment purchases.

New Accounting Pronouncements

See discussion of any New Accounting Pronouncements in Note 1 to Consolidated Financial Statements.

Neogen Corporation and Subsidiaries: Consolidated Balance Sheets

ASSETS *(In thousands)*	May 31 2019	2018
Current Assets		
Cash and cash equivalents	$ 41,688	$ 83,074
Marketable securities	225,836	127,736
Accounts receivable, less allowance of $1,700 and $1,550 at May 31, 2019 and 2018, respectively	82,582	79,086
Inventories	85,992	76,005
Prepaid expenses and other current assets	13,431	9,888
Total Current Assets	449,529	375,789
Property and Equipment		
Land and improvements	5,324	4,730
Buildings and improvements	46,205	44,008
Machinery and equipment	82,752	74,911
Furniture and fixtures	3,895	3,568
Construction in progress	2,294	2,654
	140,470	129,871
Less accumulated depreciation	65,623	56,802
Net Property and Equipment	74,847	73,069
Other Assets		
Goodwill	103,619	99,558
Other non-amortizable intangible assets	15,649	14,938
Amortizable intangible assets, net of accumulated amortization of $40,835 and $37,049 at May 31, 2019 and 2018, respectively	52,096	54,655
Total Other Assets	171,364	169,151
Total Assets	$ 695,740	$ 618,009

LIABILITIES AND STOCKHOLDERS' EQUITY *(In thousands, except share and per share)*	May 31 2019	2018
Current Liabilities		
Accounts payable	$ 19,063	$ 20,750
Accruals		
Accrued compensation	7,085	6,065
Income taxes	601	165
Other accruals	11,502	11,708
Total Current Liabilities	38,251	38,688
Deferred Income Taxes	15,618	14,103
Other Non-Current Liabilities	3,972	5,043
Total Liabilities	57,841	57,834
Commitments and Contingencies (Note 7)		
Equity		
Preferred stock, $1.00 par value – shares authorized 100,000; none issued and outstanding	–	–
Common stock, $0.16 par value – shares authorized 120,000,000; 52,216,589 and 51,735,732 shares issued and outstanding at May 31, 2019 and 2018, respectively	8,355	8,278
Additional paid-in capital	221,937	202,572
Accumulated other comprehensive loss	(11,640)	(9,746)
Retained earnings	419,247	359,071
Total Stockholders' Equity	637,899	560,175
Total Liabilities and Stockholders' Equity	$ 695,740	$ 618,009

See accompanying notes to consolidated financial statements.

Neogen Corporation and Subsidiaries: Consolidated Statements of Income

(In thousands, except per share)	Year ended May 31 2019	2018	2017
Revenues			
Product revenues	$ 339,439	$ 331,288	$ 303,148
Service revenues	74,747	66,642	55,129
Total Revenues	414,186	397,930	358,277
Cost of Revenues			
Cost of product revenues	179,660	173,725	156,295
Cost of service revenues	42,606	37,933	33,058
Total Cost of Revenues	222,266	211,658	189,353
Gross Margin	191,920	186,272	168,924
Operating Expenses			
Sales and marketing	70,230	66,929	59,380
General and administrative	40,791	38,294	34,214
Research and development	12,805	10,855	10,385
Total Operating Expenses	123,826	116,078	103,979
Operating Income	68,094	70,194	64,945
Other Income			
Interest income, net	4,683	2,043	838
Royalty income	150	147	171
Other, net	32	1,081	719
Total Other Income	4,865	3,271	1,728
Income Before Income Taxes	72,959	73,465	66,673
Provision for Income Taxes	12,783	10,250	22,700
Net Income	60,176	63,215	43,973
Net Income Attributable to Non-controlling Interest	–	(70)	(180)
Net Income Attributable to Neogen	$ 60,176	$ 63,145	$ 43,793
Net Income Attributable to Neogen per Share			
Basic	$ 1.16	$ 1.23	$ 0.87
Diluted	$ 1.15	$ 1.21	$ 0.86

See accompanying notes to consolidated financial statements.

Neogen Corporation and Subsidiaries: Consolidated Statements of Comprehensive Income

(In thousands)	Year ended May 31 2019	2018	2017
Net income	$ 60,176	$ 63,215	$ 43,973
Other comprehensive loss, net of tax: foreign currency translations	(1,894)	(2,543)	(3,257)
Comprehensive income	58,282	60,672	40,716
Comprehensive loss attributable to non-controlling interest	–	(70)	(180)
Comprehensive income attributable to Neogen	$ 58,282	$ 60,602	$ 40,536

See accompanying notes to consolidated financial statements.

Neogen Corporation and Subsidiaries: Consolidated Statements of Equity

(In thousands, except shares)	Common Stock Shares	Common Stock Amount	Additional Paid-in Capital	Accumulated Other Comprehensive Income (Loss)	Retained Earnings	Non-controlling Interest	Total Equity
Balance, May 31, 2016	50,090,252	$ 8,014	$ 147,996	$ (3,946)	$ 252,133	$ (37)	$ 404,160
Exercise of options, share-based compensation and $3,922 income tax benefit	817,284	131	26,589				26,720
Issuance of shares under employee stock purchase plan	24,953	4	921				925
Purchase of minority interest			(764)				(764)
Net income for 2017					43,793	180	43,973
Other comprehensive loss				(3,257)			(3,257)
Balance, May 31, 2017	50,932,489	8,149	174,742	(7,203)	295,926	143	471,757
Exercise of options, share-based compensation	781,116	125	26,992				27,117
Issuance of shares under employee stock purchase plan	22,127	4	1,048				1,052
Purchase of minority interest			(210)			(213)	(423)
Net income for 2018					63,145	70	63,215
Other comprehensive loss				(2,543)			(2,543)
Balance, May 31, 2018	51,735,732	8,278	202,572	(9,746)	359,071	–	560,175
Exercise of options, share-based compensation	512,527	82	21,335				21,417
Issuance of shares under employee stock purchase plan	18,330	3	1,157				1,160
Shares repurchased	(50,000)	(8)	(3,127)				(3,135)
Net income for 2019					60,176		60,176
Other comprehensive loss				(1,894)			(1,894)
Balance, May 31, 2019	**52,216,589**	**$ 8,355**	**$221,937**	**$ (11,640)**	**$ 419,247**	**$ –**	**$ 637,899**

See accompanying notes to consolidated financial statements.

Neogen Corporation and Subsidiaries: Consolidated Statements of Cash Flows

(In thousands)	Year ended May 31 2019	2018	2017
Cash Flows From Operating Activities			
Net income	$ 60,176	$ 63,215	$ 43,973
Adjustments to reconcile net income to net cash provided from operating activities:			
Depreciation and amortization	17,624	17,058	14,691
Deferred income taxes	1,197	(2,996)	(292)
Share-based compensation	5,543	4,909	5,261
Excess income tax benefit from the exercise of stock options	–	–	(3,922)
Changes in operating assets and liabilities, net of business acquisitions:			
Accounts receivable	(4,025)	(10,233)	5,035
Inventories	(10,437)	(2,647)	(6,970)
Prepaid expenses and other assets	(3,569)	(2,275)	812
Accounts payable	(1,461)	4,381	(1,691)
Accruals and other changes	(1,206)	(2,281)	3,377
Net Cash From Operating Activities	63,842	69,131	60,274
Cash Flows Used In Investing Activities			
Purchases of property, equipment and other non-current intangible assets	(14,661)	(20,946)	(14,578)
Proceeds from the sales of marketable securities	339,225	299,751	149,226
Purchases of marketable securities	(437,324)	(361,419)	(162,755)
Business acquisitions, net of cash acquired	(6,388)	(468)	(34,029)
Net Cash Used In Investing Activities	(119,148)	(83,082)	(62,136)
Cash Flows From Financing Activities			
Exercise of stock options and other	17,034	23,261	21,148
Repurchase of common stock	(3,135)	–	–
Excess income tax benefit from the exercise of stock options	–	–	3,922
Purchase of non-controlling minority interest	–	(423)	–
Net Cash From Financing Activities	13,899	22,838	25,070
Effect of Exchange Rate on Cash	21	(3,380)	(898)
Net (Decrease) Increase In Cash and Cash Equivalents	(41,386)	5,507	22,310
Cash And Cash Equivalents, Beginning of Year	83,074	77,567	55,257
Cash And Cash Equivalents, End of Year	$ 41,688	$ 83,074	$ 77,567
Supplementary Cash Flow Information			
Income taxes paid, net of refunds	$ 13,027	$ 14,966	$ 17,704

See accompanying notes to consolidated financial statements.

Neogen Corporation and Subsidiaries: Notes to Consolidated Financial Statements

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Nature of Operations

Neogen Corporation develops, manufactures and markets a diverse line of products and services dedicated to food and animal safety.

Basis of Consolidation

The consolidated financial statements include the accounts of Neogen Corporation and its subsidiaries, all of which are wholly-owned as of May 31, 2019. Neogen Latinoamérica was 100% owned as of May 31, 2019 and May 31, 2018; Neogen purchased all shares owned by the minority interest owner on December 31, 2017, which increased its ownership in Neogen Latinoamérica from 90% to 100%. For Neogen do Brasil, the Company purchased the 10% owned by two minority interest owners on February 28, 2017, which increased its ownership interest to 100%. Non-controlling interest represents the non-controlling owners' proportionate share in the equity of these subsidiaries; the non-controlling owners' proportionate share in the income or losses of the subsidiaries is subtracted from, or added to, Neogen's net income to calculate the net income attributable to Neogen Corporation.

All intercompany accounts and transactions have been eliminated in consolidation.

Share and per share amounts reflect the December 29, 2017 4-for-3 stock split as if it took place at the beginning of the period presented.

Recently Adopted Accounting Standards

Revenue Recognition

On June 1, 2018, the Company adopted ASU No. 2014-09—Revenue from Contracts with Customers (Topic 606). Refer to the Revenue Recognition section of Note 1 to the consolidated financial statements for further information.

Classification of Cash Receipts and Payments

In August 2016, the FASB issued ASU No. 2016-15—Classification of Certain Cash Receipts and Cash Payments (a consensus of the Emerging Issues Task Force). The amendments in ASU 2016-15 address eight specific cash flow issues and apply to all entities that are required to present a statement of cash flows under FASB Accounting Standards Codification (FASB ASC) 230, Statement of Cash Flows. The amendments in ASU 2016-15 are effective for public business entities for fiscal years beginning after December 15, 2017, and interim periods within those fiscal years. The Company adopted this ASU on June 1, 2018; the impact on its consolidated financial statements was immaterial.

Recent Accounting Pronouncements Not Yet Adopted

Leases

In February 2016, the FASB issued ASU No. 2016-02—Leases to increase transparency and comparability among organizations by recognizing lease assets and lease liabilities on the balance sheet and disclosing key information about leasing arrangements. A lessee should recognize in the statement of financial position a liability to make lease payments (the lease liability) and a right-of-use asset representing its right to use the underlying asset for the lease term. The recognition, measurement and presentation of expenses and cash flows arising from a lease by a lessor have not significantly changed from previous U.S. GAAP. This ASU is effective for annual periods, including interim periods within those annual periods, beginning after December 15, 2018. Modified retrospective application is required with certain practical expedients. The Company will adopt this ASU on June 1, 2019. The Company has performed a review of its lessee and lessor arrangements, including revenue through leasing programs as well as lease expenses, which primarily result from operating lease arrangements at most of the Company's facilities. The Company will record a right-of-use (ROU) asset and corresponding lease liability on the balance sheet in the first quarter of fiscal 2020 and has determined the impact of this pronouncement on its consolidated financial condition and results of operations is immaterial.

Financial Instruments- Credit Losses

In June 2016, the FASB issued ASU No. 2016-13—Measurement of Credit Losses on Financial Instruments, which changes how companies measure credit losses on most financial instruments measured at amortized cost and certain other instruments, such as loans, receivables and held-to-maturity debt securities. Rather than generally recognizing credit losses when it is probable that the loss has been incurred, the revised guidance requires companies to recognize an allowance for credit losses for the difference between the amortized cost basis of a financial instrument and the amount of amortized cost that the company expects to collect over the instrument's contractual life. ASU 2016-13 is effective for fiscal periods beginning after December 15, 2019 and must be adopted as a cumulative effect adjustment to retained earnings. Early adoption is permitted. The Company does not believe adoption of this guidance will have an impact on its consolidated financial statements.

Fair Value Measurements

In August 2018, the FASB issued ASU 2018-3, Fair Value Measurement (Topic 820): Disclosure Framework-Changes to the Disclosure Requirements for Fair Value Measurement, which modifies the disclosure requirements of fair value measurements. ASU 2018-13 is effective for fiscal years beginning after December 15, 2019 and early adoption is permitted. The Company does not believe adoption of this guidance will have an impact on its consolidated financial statements.

Cloud Computing Implementation Cost

In August 2018, the FASB issued ASU 2018-15, Intangible-Goodwill and Other Internal-Use Software (Subtopic 350-40): Customer's Accounting for Implementation Cost Incurred in a Cloud Computing Arrangement That Is a Service Contract, which clarifies the accounting for implementation costs in cloud computing arrangements. ASU 2018-15 is effective for fiscal years beginning after December 15, 2019 and early adoption is permitted. The Company does not believe adoption of this guidance will have an impact on its consolidated financial statements.

Comprehensive Income

Comprehensive income represents net income and any revenues, expenses, gains and losses that, under U.S. generally accepted accounting principles, are excluded from net income and recognized directly as a component of equity. Accumulated other comprehensive income (loss) consists solely of foreign currency translation adjustments.

Fair Value of Financial Instruments

The carrying amounts of the Company's financial instruments other than cash equivalents and marketable securities, which include accounts receivable and accounts payable, approximate fair value based on either their short maturity or current terms for similar instruments.

Fair value measurements are determined based upon the exit price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants exclusive of any transaction costs. The Company utilizes a fair value hierarchy based upon the observability of inputs used in valuation techniques as follows:

Level 1: Observable inputs such as quoted prices in active markets;

Level 2: Inputs, other than quoted prices in active markets, that are observable either directly or indirectly; and

Level 3: Unobservable inputs in which there is little or no market data, which require the reporting entity to develop its own assumptions.

Cash and Cash Equivalents

Cash and cash equivalents consist of bank demand accounts, savings deposits, certificates of deposit and commercial paper with original maturities of 90 days or less. Cash and cash equivalents are maintained at financial institutions and, at times, balances may exceed federally insured limits. The Company has never experienced any losses related to these balances and believes it is not exposed to significant credit risk regarding its cash and cash equivalents. Cash and cash equivalents were $41,688,000 and $83,074,000 at May 31, 2019 and 2018, respectively. The carrying value of these assets approximates fair value due to the short maturity of these instruments and meets the Level 1 criteria. Cash held by foreign subsidiaries was $8,711,000 and $7,101,000 at May 31, 2019 and 2018, respectively.

Marketable Securities

The Company has marketable securities held by banks or broker-dealers at May 31, 2019, consisting of short-term domestic certificates of deposit of $17,682,000 and commercial paper rated at least A-1/P-1 (short-term) and A/A2 (long-term) with maturities between 91 days and two years of $208,154,000. Total outstanding marketable securities at May 31, 2019 was $225,836,000; there were $127,736,000 in marketable securities outstanding at May 31, 2018. These securities are classified as available for sale. The primary objective of management's short-term investment activity is to preserve capital for the purpose of funding operations, capital expenditures and business acquisitions; short-term investments are not entered into for trading or speculative purposes. These securities are recorded at fair value (that approximates cost) based on recent trades or pricing models and therefore meet the Level 2 criteria. Interest income on these investments is recorded within Other Income on the income statement.

Marketable Securities as of May 31,2019 and 2018 are listed below by classification and remaining maturities.

		Year ended May 31	
	Maturity	2019	2018
U.S. Treasuries	0 –9 0 days	$ 2,470,000	$ 19,910,000
	91 – 180 days	–	–
	181 days – 1 year	2,435,000	–
	1 – 2 years	2,505,000	–
Commercial Paper	0 –9 0 days	84,338,000	47,740,000
	91 – 180 days	47,960,000	32,673,000
	181 days – 1 year	34,369,000	–
	1 – 2 years	34,078,000	–
Certificates of Deposit	0 –9 0 days	7,732,000	5,446,000
	91 – 180 days	5,000,000	8,747,000
	181 days – 1 year	750,000	13,220,000
	1 – 2 years	4,199,000	–
Total Marketable Securities		$ 225,836,000	$ 127,736,000

Use of Estimates

The preparation of these financial statements requires that management make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosures of contingent assets and liabilities. On an ongoing basis, management evaluates the estimates, including, but not limited to, variable consideration related to revenue recognition, allowances for doubtful accounts, the market value of, and demand for, inventories, stock-based compensation, provision for income taxes and related balance sheet accounts, accruals, goodwill and other intangible assets. These estimates are based on historical experience and on various other assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

Accounts Receivable and Concentrations of Credit Risk

Financial instruments which potentially subject Neogen to concentrations of credit risk consist principally of accounts receivable. Management attempts to minimize credit risk by reviewing customers' credit history before extending credit and by monitoring credit exposure on a regular basis. An allowance for doubtful accounts on accounts receivable is established based upon factors surrounding the credit risk of specific customers, historical trends and other information. Collateral or other security is generally not required for accounts receivable. Once a receivable balance has been determined to be uncollectible, that amount is charged against the allowance for doubtful accounts. No customer accounted for more than 10% of accounts receivable at May 31, 2019 or 2018, respectively. The activity in the allowance for doubtful accounts was as follows:

	Year ended May 31		
(In thousands)	**2019**	2018	2017
Begining Balance	**$ 1,550**	$ 2,000	$ 1,500
Provision	**263**	152	645
Recoveries	**38**	40	25
Write-offs	**(151)**	(642)	(170)
Ending Balance	**$ 1,700**	$ 1,550	$ 2,000

Inventories

Inventories are stated at the lower of cost or net realizable value, determined on the first-in, first-out method. The components of inventories were as follows:

	Year ended May 31	
(In thousands)	**2019**	2018
Raw materials	**$ 41,594**	$ 36,702
Work-in-process	**5,581**	5,993
Finished goods	**38,817**	33,310
	$ 85,992	$ 76,005

The Company's inventories are analyzed for slow moving, expired and obsolete items on a quarterly basis and the valuation allowance is adjusted as required. The valuation allowance for inventory was $2,250,000 and $2,200,000 at May 31, 2019 and 2018, respectively.

Property and Equipment

Property and equipment is stated at cost. Expenditures for major improvements are capitalized while repairs and maintenance are charged to expense. Depreciation is provided on the straight-line method over the estimated useful lives of the respective assets, which are generally seven to 39 years for buildings and improvements and three to ten years for furniture, fixtures, machinery and equipment. Depreciation expense was $11,315,000, $10,315,000 and $8,783,000 in fiscal years 2019, 2018 and 2017, respectively.

Goodwill and Other Intangible Assets

Goodwill represents the excess of purchase price over fair value of tangible net assets of acquired businesses after amounts are allocated to other identifiable intangible assets. Other intangible assets include customer relationships, trademarks, licenses, trade names, covenants not-to-compete and patents. Amortizable intangible assets are amortized on either an accelerated or a straight-line basis, generally over 5 to 25 years. Management reviews the carrying amounts of goodwill and other non-amortizable intangible assets annually, or when indications of impairment exist, to determine if such assets may be impaired by performing a quantitative assessment. If the carrying amounts of these assets are deemed to be less than fair value based upon a discounted cash flow analysis and comparison to comparable earnings multiples of peer companies, such assets are reduced to their estimated fair value and a charge is made to operations. The remaining weighted-average amortization period for intangibles was 10 years and 11 years at May 31, 2019 and May 31, 2018, respectively.

Long-lived Assets

Management reviews the carrying values of its long-lived assets to be held and used, including definite-lived intangible assets, for possible impairment whenever events or changes in business conditions warrant such a review. The carrying value of a long-lived asset is considered impaired when the anticipated separately identifiable undiscounted cash flows over the remaining useful life of the asset are less than the carrying value of the asset. In such an event, fair value is determined using discounted cash flows, and if lower than the carrying value, impairment is recognized through a charge to operations.

Reclassifications

Certain amounts in the fiscal 2018 and 2017 financial statements have been reclassified to conform with the fiscal 2019 presentation.

Equity Compensation Plans

At May 31, 2019, the Company had stock option plans which are described more fully in Note 5 to the consolidated financial statements.

The weighted-average fair value per share of stock options granted during fiscal years 2019, 2018 and 2017, estimated on the date of grant using the Black-Scholes option pricing model, was $14.91, $14.47 and $11.89, respectively. The fair value of stock options granted was estimated using the following weighted-average assumptions:

	Year ended May 31		
	2019	2018	2017
Risk-free interest rate	**2.6%**	1.6%	1.2%
Expected dividend yield	**0.0%**	0.0%	0.0%
Expected stock volatility	**27.0%**	27.7%	35.2%
Expected option life	**3.5 years**	4.0 years	4.0 years

The risk-free interest rate for periods within the expected life of options granted is based on the United States Treasury yield curve in effect at the time of grant. Expected stock price volatility is based on historical volatility of the Company's stock. The expected option life, representing the period of time that options granted are expected to be outstanding, is based on historical option exercise and employee termination data. Prior to the fiscal 2017 grants, Neogen recognized the fair value of stock options using the accelerated method over their requisite service periods which management has determined to be the vesting periods; for options granted in fiscal years 2019, 2018 and 2017, the Company recognized the fair value of stock options using the straight-line method.

Shipping and Handling Costs

Shipping and handling costs that are charged to and reimbursed by the customer are recognized as revenues, while the related expenses incurred by Neogen are recorded in sales and marketing expense; these expenses totaled $13,503,000, $12,147,000 and $10,185,000 in fiscal years 2019, 2018 and 2017, respectively.

Income Taxes

The Company accounts for income taxes using the asset and liability method. Under this method, deferred income tax assets and liabilities are determined based on differences between the financial reporting and tax bases of assets and liabilities and for tax credit carryforwards and are measured using the enacted tax rates in effect for the years in which the differences are expected to reverse. Deferred income tax expense represents the change in net deferred income tax assets and liabilities during the year.

The Company's wholly-owned foreign subsidiaries are comprised of Neogen Europe, Lab M Holdings, Quat-Chem, Neogen do Brasil, Rogama Industria e Comercio Ltda, Neogen Latinoamérica, Neogen Bio-Scientific Technology Co (Shanghai), Neogen Food and Animal Security (India), Neogen Canada, and Neogen Australasia Pty Limited. Based on historical experience, as well as management's future plans, earnings from these subsidiaries are expected to be re-invested indefinitely for future expansion and working capital needs. Furthermore, Neogen's domestic operations have historically produced sufficient operating cash flow to mitigate the need to remit foreign earnings. On an annual basis, the Company evaluates the current business environment and whether any new events or other external changes might require a re-evaluation of the decision to indefinitely re-invest foreign earnings. At May 31, 2019, unremitted earnings of the Company's foreign subsidiaries were $55,553,000.

On December 22, 2017, the Tax Cuts and Jobs Act of 2017 (the "U.S. Tax Act") was signed into law making significant changes to the Internal Revenue Code. Changes include a federal corporate tax rate reduced from 35% to 21% for tax years beginning after December 31, 2017, the transition of U.S. international taxation from a worldwide tax system to a territorial system, and a one-time transition tax on the mandatory deemed repatriation of foreign earnings. The U. S. Tax Act also includes a provision to tax global intangible low-taxed income (GILTI) of foreign subsidiaries and a deduction for foreign derived intangible income (FDII), both of which became effective for us beginning June 1, 2018. See Note 6 to the consolidated financial statements for further information.

Research and Development Costs

Research and development costs, which consist primarily of compensation costs, administrative expenses and new product development, among other items, are expensed as incurred.

Advertising Costs

Advertising costs are expensed as incurred and totaled $1,471,000, $1,411,000 and $1,426,000 in fiscal years 2019, 2018 and 2017, respectively.

Net Income Attributable to Neogen per Share

Basic net income per share is based on the weighted average number of common shares outstanding during each year. Diluted earnings per share is based on the weighted average number of common shares and dilutive potential common shares outstanding. Our dilutive potential common shares outstanding during the years result entirely from dilutive stock options. The following table presents the net income per share calculations:

	Year ended May 31		
(In thousands, except per share)	**2019**	2018	2017
Numerator for basic and diluted net income per share – Net income attributable to Neogen	**$ 60,176**	$ 63,145	$ 43,793
Denominator for basic net income per share – Weighted average shares	**51,888**	51,358	50,544
Effect of dilutive stock options	**537**	791	621
Denominator for diluted net income per share	**52,425**	52,149	51,165
Net income attributable to Neogen per share			
Basic	**$ 1.16**	$ 1.23	$ 0.87
Diluted	**$ 1.15**	$ 1.21	$ 0.86

At May 31, 2019, 5,000 shares were excluded from the computation of diluted net income per share, as the option exercise prices exceeded the average market price of the common shares. In 2018 and 2017, all shares were included in the computation.

Revenue Recognition

On June 1, 2018, Neogen adopted ASC Topic 606—Revenue from Contracts with Customers (Topic 606). This guidance outlines a single comprehensive model for entities to use in accounting for revenue arising from contracts with customers and supersedes most current revenue recognition guidance, including industry-specific guidance. The core principle of the revenue model is that an entity should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. Neogen adopted this standard using the full retrospective approach. This approach was chosen to provide appropriate comparisons against the Company's prior year financial statements; accordingly, historical information for the years ended May 31, 2018 and 2017 has been adjusted to conform to the new standard.

The adoption of Topic 606 did not have a material impact on the consolidated financial statements.

Under Topic 606, the Company determines the amount of revenue to be recognized through application of the following steps:

- Identification of the contract with a customer;
- Identification of the performance obligations in the contract;
- Determination of the transaction price;
- Allocation of the transaction price to the performance obligations in the contract; and
- Recognition of revenue when or as the Company satisfies the performance obligations.

Essentially all of Neogen's revenue is generated through contracts with its customers. A performance obligation is a promise in a contract to transfer a product or service to a customer. The Company generally recognizes revenue at a point in time when all of its performance obligations under the terms of a contract are satisfied. With the adoption of Topic 606, revenue is recognized upon transfer of control of promised products and services in an amount that reflects the consideration the Company expects to receive in exchange for those products or services. The collectability of consideration on the contract is reasonably assured before revenue is recognized. To the extent that customer payment has been received before all recognition criteria are met, these revenues are initially deferred in other accruals on the balance sheet and the revenue is recognized in the period that all recognition criteria have been met. In certain situations, Neogen provides rebates, marketing support, credits or incentives to select customers, which are accounted for as variable consideration when estimating the amount of revenue to recognize on a contract. Variable consideration reduces the amount of revenue that is recognized. These variable consideration estimates are updated at the end of each reporting period based on information currently available.

The performance obligations in Neogen's contracts are generally satisfied well within one year of contract inception. In such cases, management has elected the practical expedient to not adjust the promised amount of consideration for the effects of a significant financing component. Management has elected to utilize the practical expedient to recognize the incremental costs of obtaining a contract as an expense when incurred because the amortization period for the prepaid costs that would otherwise have been deferred and amortized is one year or less. The Company accounts for shipping and handling for products as a fulfillment activity when goods are shipped. Revenue is recognized net of any tax collected from customers; the taxes are subsequently remitted to governmental authorities. The Company's terms and conditions of sale generally do not provide for returns of product or reperformance of service except in the case of quality or warranty issues. These situations are infrequent; due to immateriality of the amount, warranty claims are recorded in the period incurred.

Neogen Corporation and Subsidiaries: Notes to Consolidated Financial Statements

The Company derives revenue from two primary sources — product revenue and service revenue.

Product revenue consists primarily of shipments of:

- Diagnostic test kits, culture media and related products used by food producers and processors to detect harmful natural toxins, foodborne bacteria, allergens and levels of general sanitation;
- Consumable products marketed to veterinarians, retailers, livestock producers and animal health product distributors; and
- Rodenticides, disinfectants and insecticides to assist in the control of rodents, insects and disease in and around agricultural, food production and other facilities.

Revenue for Neogen's products are recognized and invoiced when the product is shipped to the customer.

Service revenue consists primarily of:

- Genomic identification and related interpretive bioinformatic services; and
- Other commercial laboratory services.

Revenues for Neogen's genomics and commercial laboratory services are recognized and invoiced when the applicable laboratory service is performed and the results are conveyed to the customer.

Payment terms for products and services are generally 30 to 60 days.

The following table presents disaggregated revenue by major product and service categories for the years ended May 31, 2019 and 2018:

	Year Ended				
(Dollars in thousands)	May 31, 2019	Increase/ (Decrease)	May 31, 2018	Increase/ (Decrease)	May 31, 2017
Food Safety:					
Natural Toxins, Allergens & Drug Residues	$ 78,373	7%	$ 72,962	3%	$ 70,926
Bacterial & General Sanitation	41,966	10%	38,156	10%	34,706
Culture Media & Other	49,857	13%	44,271	12%	39,367
Rodenticides, Insecticides & Disinfectants	25,584	7%	23,821	75%	13,620
Genomics Services	17,694	16%	15,267	34%	11,415
	213,474	10%	194,477	14%	170,034
Animal Safety:					
Life Sciences	7,858	(25)%	10,411	7%	9,704
Veterinary Instruments & Disposables	44,582	(7)%	47,749	15%	41,693
Animal Care & Other	29,941	(3)%	30,930	11%	27,891
Rodenticides, Insecticides & Disinfectants	66,389	(2)%	67,646	(3)%	69,429
Genomics Services	51,942	11%	46,717	18%	39,526
	200,712	(1)%	203,453	8%	188,243
Total Revenue	$ 414,186	4%	$ 397,930	11%	$ 358,277

See Note 9 to the consolidated financial statements for disaggregated revenues by geographical location.

Revision of Previously Issued Financial Statements

The Company has historically classified certain variable consideration components resulting from volume rebates, distributor support, and other marketing discounts as cost of revenues or sales and marketing expense in its consolidated financial statements of income. These amounts should have been classified as contra revenue in product or service revenues. The Company had determined in prior periods that the misstatements were clearly immaterial, individually and in the aggregate, to each of the reporting periods affected. The Company began properly classifying these items as contra revenues beginning in the fiscal year ended May 31, 2019 and has revised the financials for prior fiscal years 2018 and 2017 to conform to the current period presentation. These immaterial adjustments had no impact on the Company's operating income, income before taxes, net income or reported earnings per share, and no change to stockholders' equity.

Presented below are the effects of the revisions on the line items within our previously issued consolidated statements of income for the years ended May 31, 2018 and 2017. Revised consolidated statements of income related to these periods are presented in this Form 10-K.

	Year Ended May 31, 2018			Year Ended May 31, 2017		
	As Previously Reported	Adjustments (in thousands)	As Revised	As Previously Reported	Adjustments (in thousands)	As Revised
Revenues:						
Product revenues	$ 335,554	$ (4,266)	$ 331,288	$ 306,512	$ (3,390)	$ 303,148
Service revenues	66,698	(56)	66,642	55,082	73	55,129
Total revenues	402,252	(4,322)	397,930	361,594	(3,317)	358,277
Cost of revenues:						
Cost of product revenues	174,067	(342)	173,725	156,568	(273)	156,295
Cost of service revenues	37,933	–	37,933	33,058	–	33,058
Total cost of revenues	212,000	(342)	211,658	189,626	(273)	189,353
Gross margin	190,252	(3,980)	186,272	171,968	(3,044)	168,924
Operating expenses:						
Sales and marketing	70,909	(3,980)	66,929	62,424	(3,044)	59,380
Total operating expenses	120,058	(3,980)	116,078	107,023	(3,044)	103,979
Operating income	$ 70,194	$ –	$ 70,194	$ 64,945	$ –	$ 64,945

The revisions had no impact on our audited consolidated balance sheets as of May 31, 2018 and 2017 and no impact on our audited consolidated statements of equity or audited consolidated statements of cash flows for the fiscal years ended May 31, 2018 and 2017.

2. GOODWILL AND OTHER INTANGIBLE ASSETS

Management has completed the annual impairment analysis of goodwill and intangible assets with indefinite lives using a quantitative assessment as of the first day of the fourth quarter of fiscal years 2019, 2018 and 2017, respectively, and determined that recorded amounts were not considered impaired and that no write-down was necessary.

The following table summarizes goodwill by reportable segment:

(In thousands)	Food Safety	Animal Safety	Total
Balance, May 31, 2017	$ 45,920	$ 58,839	$ 104,759
Goodwill acquired	–	757	757
Goodwill adjustments and/or currency [1]	(5,919)	(39)	(5,958)
Balance, May 31, 2018	$ 40,001	$ 59,557	$ 99,558
Goodwill acquired	3,796	1,196	4,992
Goodwill adjustments and/or currency [1]	(1,244)	313	(931)
Balance, May 31, 2019	**$ 42,553**	**$ 61,066**	**$ 103,619**

[1] Includes final purchase price allocation adjustment.

At May 31, 2019, non-amortizable intangible assets included licenses of $569,000, trademarks of $13,717,000 and other intangibles of $1,363,000. At May 31, 2018, non-amortizable intangible assets included licenses of $569,000, trademarks of $12,989,000 and other intangibles of $1,380,000.

Amortizable intangible assets consisted of the following and are included in customer-based intangibles and other non-current assets within the consolidated balance sheets:

(In thousands)	Gross Carrying Amount	Less Accumulated Amortization	Net Carrying Amount
Licenses	$ 9,813	$ 3,182	$ 6,631
Covenants not to compete	862	542	320
Patents	8,158	3,570	4,588
Customer-based intangibles	57,634	28,017	29,617
Other product and service-related intangibles	16,464	5,524	10,940
Balance, May 31, 2019	**$ 92,931**	**$ 40,835**	**$ 52,096**
Licenses	$ 9,491	$ 2,523	$ 6,968
Covenants not to compete	801	483	318
Patents	9,693	5,013	4,680
Customer-based intangibles	56,420	24,579	31,841
Other product and service-related intangibles	15,299	4,451	10,848
Balance, May 31, 2018	$ 91,704	$ 37,049	$ 54,655

Amortization expense for intangibles totaled $6,309,000, $6,743,000 and $5,908,000 in fiscal years 2019, 2018, and 2017, respectively. The estimated amortization expense for each of the five succeeding fiscal years is as follows: $6,664,000 in 2020, $6,025,000 in 2021, $5,673,000 in 2022, $5,299,000 in 2023 and $4,989,000 in 2024. The amortizable intangible assets useful lives are 2 to 20 years for licenses, 5 to 13 years for covenants not to compete, 5 to 25 years for patents, 5 to 20 years for customer-based intangibles and 5 to 20 years for other product and service-related intangibles, which primarily consist of product formulations. All definite-lived intangibles are amortized on a straight-line basis with the exception of definite-lived customer-based intangibles and product and service-related intangibles, which are amortized on either a straight-line or an accelerated basis.

3. BUSINESS COMBINATIONS

The Consolidated Statements of Income reflect the results of operations for business acquisitions since the respective dates of purchase. All are accounted for using the acquisition method. Goodwill recognized in the acquisitions described below relates primarily to enhancing the Company's strategic platform for the expansion of available product offerings.

Fiscal 2017

On December 1, 2016, the Company acquired the stock of Quat-Chem Ltd., a chemical company that manufactures biosecurity products, based in Rochdale, England. Consideration for the purchase was $21,606,000 in cash and up to $3,778,000 of contingent consideration, due at the end of each of the first two years, based on an excess net sales formula. The final purchase price allocation, based upon the fair value of these assets and liabilities determined using the income approach, included accounts receivable of $4,684,000, inventory of $1,243,000, land, property and equipment of $2,526,000, accounts payable of $2,197,000, deferred tax liability of $1,758,000, contingent consideration accrual of $1,058,000, other current liabilities of $604,000, non-amortizable intangible assets of $1,889,000, intangible assets of $6,900,000 (with an estimated life of 5-15 years) and the remainder to goodwill (non-deductible for tax purposes). These values are Level 3 fair value measurements. In January 2018, Neogen paid the former owners $249,000 in contingent consideration based on the achievement of sales targets in the first year, and recorded a credit of $255,000 to Other Income, reducing the contingent consideration accrual by a corresponding amount; $554,000 remained accrued for contingent consideration payable at the end of the second year. In January 2019, Neogen paid the former owners $184,000 in contingent consideration based on the achievement of sales targets in the second year; the remaining accrual balance was adjusted to Other Income. This business continues to operate in its current location and is managed by Neogen Europe, reporting within the Food Safety segment.

On December 27, 2016, the Company acquired the stock of Rogama Industria e Comercio, Ltda., a company that develops and manufactures rodenticides and insecticides, based near São Paulo, Brazil. Consideration for the purchase was $12,423,000 in cash and up to $2,069,000 of contingent consideration, due at the end of each of the first two years, based on an excess net sales formula. The final purchase price allocation, based upon the fair value of these assets and liabilities determined using the income approach, included accounts receivable of $1,866,000, other non-current assets of $26,000, inventory of $960,000, land, property and equipment of $4,734,000, current liabilities of $2,562,000, contingent consideration accrual of $213,000, deferred tax liability of $2,034,000, non-amortizable intangible assets of $870,000, intangible assets of $5,112,000 (with an estimated life of 5-15 years) and the remainder to goodwill (deductible for tax purposes). These values are Level 3 fair value measurements. In April 2018, Neogen paid the former owners $130,000 in contingent consideration based on the achievement of sales targets in the first year. The contingent consideration accrual was reduced by the same amount; $83,000 remained accrued for contingent consideration payable at the end of the second year. In April 2019, the Company paid the former owners $23,000 in contingent consideration based on the achievement of sales targets in the second year; the remaining accrual balance was adjusted to Other Income. This business continues to operate in its current location and is managed by Neogen do Brasil, reporting within the Food Safety segment.

Fiscal 2018

On September 1, 2017, the Company acquired the assets of The University of Queensland Animal Genetics Laboratory, an animal genomics laboratory located near Brisbane, Australia. This acquisition is intended to accelerate the growth of Neogen's animal genomics business in Australia and New Zealand. Consideration for the purchase was $2,063,000; $468,000 was initially paid in cash with the remainder due in annual installments over the next five years. The final purchase price allocation, based upon the fair value of these assets and liabilities determined using the income approach, included inventory of $19,000, equipment of $419,000, non-current liabilities of $1,629,000, intangible assets of $902,000 (with an estimated life of 5-15 years) and the remainder to goodwill (non-deductible for tax purposes). These values are Level 3 fair value measurements. The business, renamed Neogen Australasia, continues to operate in its current location, reporting within the Animal Safety segment.

Fiscal 2019

On August 1, 2018, the Company acquired the stock of Clarus Labs, Inc., a manufacturer of water testing products. Neogen has distributed Clarus' Colitag water test to the food and beverage industries since 2004 and this acquisition gives the Company access to sell this product to new markets. Consideration for the purchase was $4,204,000 in cash and approximately $1.3 million of contingent consideration, due semiannually for the first five years, based on an excess net sales formula. The final purchase price allocation, based upon the fair value of these assets and liabilities determined using the income approach, included inventory of $32,000, machinery and equipment of $120,000, accounts payable of $53,000, contingent consideration accrual of $1,256,000, non-current deferred tax liability of $544,000, non-amortizable intangible assets of $878,000, intangible assets of $1,487,000 (with an estimated life of 5-15 years) and the remainder to goodwill (non-deductible for tax purposes). These values are Level 3 fair value measurements. In February 2019, $90,000 was paid to the former owners as contingent consideration from the accrual. Manufacturing of these products was moved to the Company's Lansing, Michigan location in October 2018, reporting within the Food Safety segment.

On September 4, 2018, the Company acquired the assets of Livestock Genetic Services, LLC, a Virginia-based company that specializes in genetic evaluations and data management for cattle breeding organizations. Livestock Genetic Services has been a long-time strategic partner of Neogen and the acquisition enhances the Company's in-house genetic evaluation capabilities. Consideration for the purchase was $1,100,000 in cash, with $700,000 paid at closing and $400,000 payable to the former owner on September 1, 2019, and approximately $385,000 of contingent consideration, payable over the next three years. The final purchase price allocation, based upon the fair value of these assets and liabilities determined using the income approach, included office equipment of $15,000, contingent consideration accrual of $385,000, intangible assets of $942,000 (with an estimated life of 5-15 years) and the remainder to goodwill (deductible for tax purposes). These values are Level 3 fair value measurements. Services provided by this operation are now performed at the Company's Lincoln, Nebraska location, reporting within the Animal Safety segment.

On January 1, 2019, the Company acquired the assets of Edmonton, Alberta-based Delta Genomics Centre, an animal genomics laboratory in Canada. Delta's laboratory operations were renamed Neogen Canada and the acquisition is intended to accelerate growth of the Company's animal genomics business in Canada. Consideration for the purchase was $1,485,000 in cash. The final purchase price allocation, based upon the fair value of these assets and liabilities determined using the income approach, included inventory of $38,000, machinery and equipment of $371,000, unearned revenue liability of $125,000, intangible assets of $532,000 (with an estimated life of 5 to 10 years) and the remainder to goodwill (deductible for tax purposes). These values are Level 3 fair value measurements. Services provided by this operation continue to be performed in Edmonton, reporting within the Animal Safety segment.

4. LONG-TERM DEBT

The Company has a financing agreement with a bank providing for a $15,000,000 unsecured revolving line of credit, which was amended on November 30, 2018 to extend the maturity from September 30, 2019 to September 30, 2021. There were no advances against the line of credit during fiscal years 2019 and 2018; there was no balance outstanding at May 31, 2019. Interest on any borrowings is LIBOR plus 100 basis points (rate under the terms of the agreement was 3.49% at May 31, 2019). Financial covenants include maintaining specified levels of tangible net worth, debt service coverage, and funded debt to EBITDA, each of which the Company was in compliance with at May 31, 2019.

5. EQUITY COMPENSATION PLANS

Incentive and non-qualified options to purchase shares of common stock may be granted to directors, officers and employees of Neogen under the terms of the Company's stock option plans. These options are granted at an exercise price of not less than the fair market value of the stock on the date of grant. Remaining shares available for grant under stock option plans were 3,997,000, 1,913,000 and 2,525,000 at May 31, 2019, 2018 and 2017, respectively. Options vest ratably over three and five-year periods and the contractual terms are generally five or ten years.

(Options in thousands)	Options	Weighted-Average Exercise Price	Weighted-Average Grant Date Fair Value
Outstanding at May 31, 2016 (875 exercisable)	2,775	$ 27.53	$ 7.97
Granted	828	40.68	11.89
Exercised	(827)	22.82	6.77
Forfeited	(77)	32.04	9.17
Outstanding at May 31, 2017 (661 exercisable)	2,699	32.88	9.51
Granted	829	59.37	14.47
Exercised	(821)	28.18	8.20
Forfeited	(208)	39.57	11.12
Outstanding at May 31, 2018 (508 exercisable)	2,499	42.63	11.44
Granted	527	62.92	14.91
Exercised	(513)	31.28	8.92
Forfeited	(128)	47.08	12.42
Outstanding at May 31, 2019 (617 exercisable)	**2,385**	**$ 49.37**	**$ 12.70**

The following is a summary of stock options outstanding at May 31, 2019:

(Options in thousands)	Options Outstanding			Options Exercisable	
Range of Exercise price	Number	Average Contractual Life (in years)	Weighted Average Exercise Price	Number	Weighted Average Exercise Price
$ 10.17–37.26	575	1.7	$ 32.07	290	$ 30.62
37.27–40.91	492	2.8	40.45	147	40.44
40.92–59.78	172	4.0	51.03	54	49.19
59.79–61.56	614	3.5	60.43	124	60.43
61.57–68.96	532	4.5	63.03	2	68.36
	2,385	3.2	49.37	617	40.68

The weighted average exercise price of shares that were exercisable at May 31, 2019 and 2018 was $40.68 and $31.23, respectively.

Compensation expense related to share-based awards was $5,543,000, $4,909,000 and $5,261,000 in fiscal years 2019, 2018 and 2017, respectively. Remaining compensation cost to be expensed in future periods for non-vested options was $15,880,000 at May 31, 2019, with a weighted average expense recognition period of 3.4 years.

(In thousands)	Year Ended May 31 2019	2018	2017
Aggregate intrinsic value of options outstanding	**$ 22,798**	$ 82,649	$ 39,388
Aggregate intrinsic vaue of options exercisable	**10,222**	22,572	13,929
Aggregate intrinsic value of options exercised	**21,382**	25,844	18,067

Common stock totaling 365,395 of the 712,500 authorized shares are reserved for issuance under the terms of the 2011 Employee Stock Purchase Plan. The plan gives eligible employees the option to purchase common stock at a 5% discount to the lower of the market value of the stock at the beginning or end of each participation period; the discount is recorded in general and administrative expense. Total individual purchases in any year are limited to 10% of compensation. Shares purchased by employees were 18,330 in fiscal 2019, 22,127 in fiscal 2018 and 24,953 in fiscal 2017.

6. INCOME TAXES

Income before income taxes by source consists of the following amounts:

	Year Ended May 31		
(In thousands)	**2019**	2018	2017
U.S.	**$ 58,479**	$ 62,310	$ 55,171
Foreign	**14,480**	11,155	11,502
	$ 72,959	$ 73,465	$ 66,673

The provision for income taxes consists of the following:

	Year Ended May 31		
(In thousands)	**2019**	2018	2017
Current:			
U.S. Taxes	**$ 8,451**	$ 10,129	$ 20,259
Foreign	**3,758**	3,066	2,514
Deferred	**574**	(2,945)	(73)
Provision for Income Taxes	**$ 12,783**	$ 10,250	$ 22,700

The reconciliation of income taxes computed at the U.S. federal statutory tax rate to income tax expense is as follows:

	Year Ended May 31		
(In thousands)	**2019**	2018	2017
Tax at U.S. statutory rate	**$ 15,321**	$ 21,459	$ 23,336
Section 199 domestic production deduction	**–**	(1,167)	(1,057)
Global intangible low-taxed income (GILTI)	**840**	–	–
Foreign derived intangible income deduction (FDII)	**(1,531)**	–	–
Foreign rate differential	**495**	(461)	(1,247)
Subpart F income	**842**	816	996
Tax benefits on stock-based compensation	**(2,586)**	(4,816)	(535)
FIN 48 reserve adjustments	**13**	(1,035)	576
Provision for state income taxes, net of federal benefit	**1,251**	975	972
Remeasurement of deferred taxes	**–**	(6,022)	–
Transition tax on foreign earnings and profits	**–**	1,223	–
Tax credits	**(1,726)**	(1,151)	(1,213)
Other	**(136)**	429	872
	$ 12,783	$ 10,250	$ 22,700

On June 1, 2017, the Company adopted ASU No. 2016-09—Compensation-Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting, which simplifies the accounting for share-based payments to employees. The guidance requires the recognition of the income effects of awards in the income statement when the awards vest or are settled, thus eliminating additional paid-in capital pools. The guidance also allows for a policy election to account for forfeitures as they occur, rather than on an estimated basis, and requires that excess tax benefits be classified as an operating activity on the Statement of Cash Flows. The adoption of this ASU decreased income tax expense by $2.6 million in fiscal 2019 and by $4.8 million in fiscal 2018.

On December 22, 2017, the Tax Cuts and Jobs Act of 2017 (the U.S. Tax Act) was signed into law, making significant changes to the Internal Revenue Code. Changes include, but are not limited to, a federal corporate tax rate decrease from 35% to 21% for tax years beginning after December 31, 2017, the transition of U.S. international taxation from a worldwide tax system to a territorial system, and a one-time transition tax on the mandatory deemed repatriation of foreign earnings. The U.S. Tax Act also includes a provision to tax global intangible low-taxed income (GILTI) of foreign subsidiaries and a deduction for foreign derived intangible income (FDII), both of which became effective for the Company beginning June 1, 2018.

In fiscal 2018, the Company recorded a net benefit of $4.8 million related to the U.S. Tax Act, due to the impact of the reduction in the tax rate on deferred tax assets and liabilities of $6.0 million, partially offset by $1.2 million of one-time transition tax on the deemed repatriation of foreign earnings. In fiscal 2019, the Company finalized its calculation of these amounts and recorded immaterial adjustments to income tax expense; the Company also recorded expense of $840,000 related to GILTI and a tax benefit of $1.5 million related to FDII.

Foreign tax credits, primarily offsetting taxes associated with Subpart F and GILTI income, were $1,296,000, $791,000 and $729,000 in fiscal years 2019, 2018 and 2017, respectively. The Company's U.S. R & D credit was $430,000 in fiscal 2019 and $422,000 in fiscal years 2018 and 2017.

Deferred income taxes reflect the tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. Significant components of our deferred income tax liabilities and assets are as follows:

	Year Ended May 31	
(In thousands)	2019	2018
Deferred income tax liabilities		
Indefinite and long-lived assets	$ (18,963)	$ (17,503)
Prepaid expenses	(586)	(573)
	(19,549)	(18,076)
Deferred income tax assets		
Stock options	1,497	1,489
Inventories and accounts receivable	1,315	1,593
Tax loss carryforwards	417	134
Valuation allowance on tax loss carryforwards	(407)	–
Accrued expenses and other	1,109	757
	3,931	3,973
Net deferred income tax liabilities	$ (15,618)	$ (14,103)

The Company is no longer subject to examination by the Internal Revenue Service for 2016 and earlier tax years.

7. COMMITMENTS AND CONTINGENCIES

The Company is involved in environmental remediation and monitoring activities at its Randolph, Wisconsin manufacturing facility and accrues for related costs when such costs are determined to be probable and estimable. The Company currently utilizes a pump and treat remediation strategy, which includes semi-annual monitoring and reporting, consulting, and maintenance of monitoring wells. Neogen expenses these annual costs of remediation, which have ranged from $38,000 to $131,000 per year over the past five years. The Company's estimated liability for these costs was $916,000 at both May 31, 2019 and 2018, measured on an undiscounted basis over an estimated period of 15 years; $100,000 of the liability is recorded within current liabilities and the remainder is recorded within other non-current liabilities in the consolidated balance sheet. In fiscal 2019, the Company performed an updated Corrective Measures Study (CMS) on the site, per a request from the Wisconsin Department of Natural Resources (WDNR), and is currently in discussion with the WDNR regarding potential alternative remediation strategies going forward. The Company believes that the current pump and treat strategy is appropriate for the site. At this time, the outcome of the review in terms of approach and future costs is unknown, but a change in the current remediation strategy, depending on the alternative selected, could require an increase in the recorded liability, with an offsetting charge to operations in the period recorded.

The Company has agreements with unrelated third parties that provide for the payment of license fees and royalties on the sale of certain products. Royalty expense, recorded in sales and marketing, under the terms of these agreements was $2,795,000, $2,876,000 and $2,659,000 for fiscal years 2019, 2018 and 2017, respectively. Some of these agreements provide for guaranteed minimum royalty payments to be paid each fiscal year by the Company for certain technologies. Future minimum royalty payments are as follows: 2020—$183,000, 2021—$191,000, 2022—$114,000, 2023—$109,000 and 2024—$109,000.

Neogen leases office and manufacturing facilities under non-cancelable operating leases. Rent expense for fiscal years 2019, 2018 and 2017 was $871,000, $799,000 and $729,000, respectively. Future fiscal year minimum rental payments for these leases over their remaining terms are as follows: 2020—$1,112,000, 2021—$810,000, 2022—$297,000, 2023—$101,000, and 2024 and later—$0.

The Company is subject to certain legal and other proceedings in the normal course of business that, in the opinion of management, should not have a material effect on its future results of operations or financial position.

8. DEFINED CONTRIBUTION BENEFIT PLAN

The Company maintains a defined contribution 401(k) benefit plan covering substantially all domestic employees. Employees are permitted to defer compensation up to IRS limits, with Neogen matching 100% of the first 3% of deferred compensation and 50% of the next 2% deferred. Neogen's expense under this plan was $1,361,000, $1,325,000, and $1,259,000 in fiscal years 2019, 2018 and 2017, respectively.

9. SEGMENT INFORMATION

The Company has two reportable segments: Food Safety and Animal Safety. The Food Safety segment is primarily engaged in the development, production and marketing of diagnostic test kits and related products used by food producers and processors to detect harmful natural toxins, foodborne bacteria, allergens and levels of general sanitation. The Animal Safety segment is primarily engaged in the development, production and marketing of products dedicated to animal safety, including a complete line of consumable products marketed to veterinarians and animal health product distributors; this segment also provides genomic identification and related interpretive bioinformatic services. Additionally, the Animal Safety segment produces and markets rodenticides, disinfectants, and insecticides to assist in the control of rodents, insects and disease in and around agricultural, food production and other facilities.

Neogen's international operations in the United Kingdom, Mexico, Brazil, China and India originally focused on the sales and marketing of our Food Safety products, and each of these units reports through the Food Safety segment. In recent years, these operations have expanded to offer the Company's complete line of products and services, including those usually associated with the Animal Safety segment such as cleaners, disinfectants, rodenticides, insecticides, veterinary instruments and genomics services. These additional products and services are managed and directed by existing management and are reported through the Food Safety segment.

The accounting policies of each of the segments are the same as those described in Note 1.

Segment information is as follows:

(In thousands)	Food Safety	Animal Safety	Corporate and Eliminations [1]	Total
Fiscal 2019				
Product revenues to external customers	**$ 190,675**	**$ 148,764**	**$ –**	**$ 339,439**
Service revenues to external customers	**22,799**	**51,948**	**–**	**74,747**
Total revenues to external customers	**213,474**	**200,712**	**–**	**414,186**
Operating income (loss)	**39,020**	**33,875**	**(4,801)**	**68,094**
Depreciation and amortization	**9,525**	**8,099**	**–**	**17,624**
Total assets	**206,267**	**221,950**	**267,523**	**695,740**
Expenditures for long-lived assets	**8,916**	**5,745**	**–**	**14,661**
Fiscal 2018				
Product revenues to external customers	$ 174,553	$ 156,735	$ –	$ 331,288
Service revenues to external customers	19,924	46,718	–	66,642
Total revenues to external customers	194,477	203,453	–	397,930
Operating income (loss)	34,561	39,529	(3,896)	70,194
Depreciation and amortization	9,083	7,975	–	17,058
Total assets	186,570	220,629	210,810	618,009
Expenditures for long-lived assets	10,538	10,408	–	20,946
Fiscal 2017				
Product revenues to external customers	$ 154,431	$ 148,717	$ –	$ 303,148
Service revenues to external customers	15,603	39,526	–	55,129
Total revenues to external customers	170,034	188,243	–	358,277
Operating income (loss)	33,971	34,841	(3,867)	64,945
Depreciation and amortization	7,088	7,603	–	14,691
Total assets	190,895	210,927	126,587	528,409
Expenditures for long-lived assets	10,332	4,246	–	14,578

[1] Includes corporate assets, including cash and cash equivalents, marketable securities, current and deferred tax accounts, and overhead expenses not allocated to specific business segments. Also includes the elimination of intersegment transactions and non-controlling interests.

The following table presents the Company's revenue disaggregated by geographical location:

	Year ended May 31	
(In thousands)	**2019**	2018
Revenues by Geographic Location		
Domestic	**$ 248,304**	$ 248,236
International	**165,882**	149,694
Total revenue	**414,186**	397,930

10. STOCK REPURCHASE

In October 2018, the Company's Board of Directors passed a resolution canceling the Company's prior stock buyback program, which had been approved in December 2008, and authorized a new program to purchase, subject to market conditions, up to 3,000,000 shares of the Company's common stock. In December 2018, the Company purchased 50,000 shares under the new program in negotiated and open market transactions for a total price, including commissions, of $3,134,727. Shares acquired under the program have been retired.

11. SUMMARY OF QUARTERLY DATA (UNAUDITED)

	Quarter Ended			
(In thousands, except per share)	August 2018	November 2018	February 2019	May 2019
Total revenues	$ 99,626	$ 107,098	$ 97,700	$ 109,762
Gross margin	46,729	50,033	44,628	50,530
Net income	15,237	16,051	13,073	15,815
Basic net income per share	0.29	0.31	0.25	0.31
Diluted net income per share	0.29	0.31	0.25	0.30

	Quarter Ended			
(In thousands, except per share)	August 2017	November 2017	February 2018	May 2018
Total revenues	$ 94,209	$ 100,698	$ 94,903	$ 108,120
Gross margin	44,924	48,249	44,601	48,498
Net income	11,936	17,153	16,581	17,545
Net income attributable to Neogen	11,914	17,100	16,586	17,545
Basic net income per share	0.23	0.33	0.32	0.34
Diluted net income per share	0.23	0.33	0.32	0.33

Quarterly net income per share is based on weighted-average shares outstanding and potentially dilutive stock options for the specific period, and as a result, will not necessarily aggregate to total net income per share as computed for the year as disclosed in the consolidated statements of income.

Report of Independent Registered Public Accounting Firm

Board of Directors and Stockholders
Neogen Corporation
Lansing, Michigan

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of Neogen Corporation (the "Company") and subsidiaries as of May 31, 2019 and 2018, the related consolidated statements of income, comprehensive income, equity, and cash flows for each of the three years in the period ended May 31, 2019, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at May 31, 2019 and 2018, and the results of its operations and its cash flows for each of the three years in the period ended May 31, 2019, in conformity with accounting principles generally accepted in the United States of America.

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 May 31, 2019, based on criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO") and our report dated July 30, 2019 expressed an unqualified opinion thereon.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's 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.

We have served as the Company's auditor since 2014.

BDO USA, LLP

BDO USA, LLP
Grand Rapids, Michigan
July 30, 2019

Management's Report on Internal Control over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rules 13-a-15(f) and 15d-15(f). Under the supervision and with the participation of our management, including the Chief Executive Officer and Chief Financial Officer, an evaluation was conducted as to the effectiveness of internal control over financial reporting as of May 31, 2019, based on the framework in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on that evaluation, management concluded that internal control over financial reporting was effective as of May 31, 2019. The effectiveness of internal control over financial reporting as of May 31, 2019 has been audited by BDO USA, LLP, an independent registered public accounting firm, as stated in its attestation report, which is included on the following page and is incorporated into this Item 9A by reference.

Changes in Internal Control over Financial Reporting

No changes in our internal control over financial reporting were identified as having occurred during the year ended May 31, 2019 that have materially affected, or are reasonably likely to materially affect, internal control over financial reporting.

John E. Adent, President and CEO

Steven J. Quinlan, Vice President and CFO

Report of Independent Registered Public Accounting Firm

Board of Directors and Stockholders
Neogen Corporation
Lansing, Michigan

Opinion on Internal Control over Financial Reporting

We have audited Neogen Corporation's (the "Company's") internal control over financial reporting as of May 31, 2019, based on criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (the "COSO criteria"). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of May 31, 2019, based on the COSO criteria.

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 May 31, 2019 and 2018, the related consolidated statements of income, comprehensive income, equity, and cash flows for each of the three years in the period ended May 31, 2019, and the related notes and our report dated July 30, 2019 expressed an unqualified opinion thereon.

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 "Item 9A, Management's 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 U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit of internal control over financial reporting 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 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.

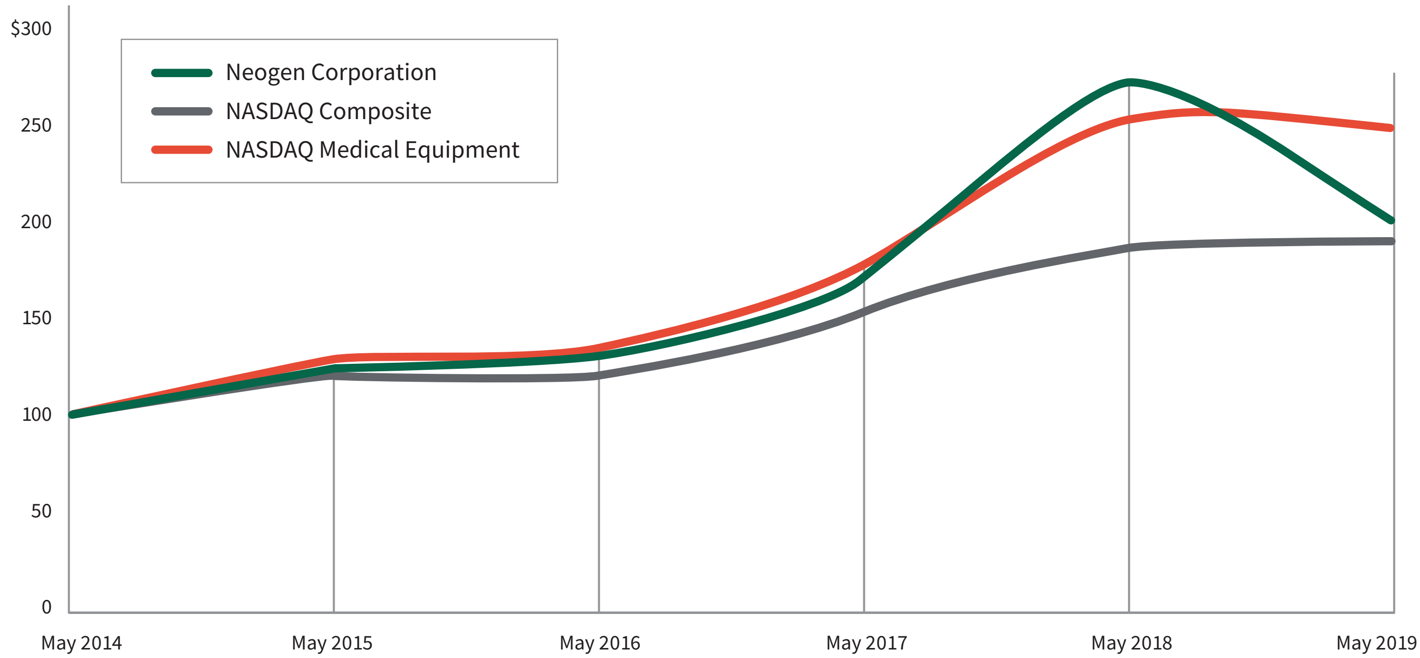
Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree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

BDO USA, LLP

BDO USA, LLP
Grand Rapids, Michigan
July 30, 2019

Neogen Corporation and Subsidiaries: Comparison of Five Year Cumulative Total Return and Stock Profile Activity

The graph below matches Neogen Corporation's cumulative 5-Year total shareholder return on common stock with the cumulative total returns of the NASDAQ Composite index and the NASDAQ Medical Equipment index. The graph tracks the performance of a $100 investment in our common stock and in each index (with the reinvestment of all dividends) from May 31, 2014 to May 31, 2019.



	May 31 of:					
	2014	2015	2016	2017	2018	**2019**
Neogen Corporation	$ 100.00	$ 123.68	$ 130.64	$ 167.48	$ 267.13	**$ 198.82**
NASDAQ Composite	100.00	120.89	119.47	151.43	183.75	**186.02**
NASDAQ Medical Equipment	100.00	127.63	134.41	176.32	249.17	**244.73**

The stock price performance included in this graph is not necessarily indicative of future stock price performance.

Market Information

Neogen Common Stock is traded on the NASDAQ Global Select Market under the symbol NEOG.

Holders

As of June 30, 2019, there were approximately 249 stockholders of record of Common Stock and management believes there are a total of approximately 10,000 beneficial holders.

Dividends

Neogen has never paid cash dividends on its Common Stock and does not anticipate paying cash dividends in the foreseeable future.

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Neogen Corporation Officers and Directors

OFFICERS

John E. Adent
President
Chief Executive Officer

Steven J. Quinlan
Vice President
Chief Financial Officer and Secretary

Stewart W. Bauck, DVM, Ph.D.
Vice President, Agrigenomics

Joseph A. Corbett
Vice President, Animal Safety
Sales and Operations

Robert S. Donofrio, Ph.D.
Vice President, Food Safety R&D

Shane M. Fitzwater
Vice President, Animal Safety Operations

Jerome L. Hagedorn
Vice President, Food Safety Operations

Melissa K. Herbert
Vice President, Government
and Industry Affairs

Jason W. Lilly, Ph.D.
Vice President, International Business

Terri A. Morrical
Vice President, Animal Safety

DIRECTORS

James L. Herbert
Neogen Corporation
Chairman of the Board

William T. Boehm, Ph.D.
Kroger Company
Former Senior Vice President
President's Council of
Economic Advisors
Former Senior Economist

James C. Borel
E.I. DuPont de Nemours
Former Executive Vice President

Ronald D. Green, Ph.D.
University of Nebraska–Lincoln
Chancellor

G. Bruce Papesh
Dart, Papesh & Co.
President

Jack C. Parnell
Siller Brothers, Inc.
Chairman of the Board
Siller Helicopters, Inc.
Chairman of the Board
U.S. Department of Agriculture
Former Deputy Secretary
Former Acting Secretary
State of California
Former Secretary of Agriculture

Thomas H. Reed
Tom Reed & Associates
President
JBS Packerland
Former Senior Vice President
Michigan Livestock Exchange
Former President and CEO
MSU Board of Trustees
Former Chairman

James P. Tobin
Monsanto
Former Vice President

Darci L. Vetter
Edelman
General Manager and Vice Chair
for Food, Agriculture and Trade
Former Chief Agricultural Negotiator
for the U.S. Trade Representative

Form 10-K and the Company's Code of Ethics

Copies of Form 10-K and the Company's Code of Ethics will be provided upon request without charge to persons directing their request to:

Neogen Corporation
Attention: Investor Relations
620 Lesher Place
Lansing, MI 48912

Annual Meeting

October 3, 2019 at 10:00 a.m.
University Club
Michigan State University
3435 Forest Road
Lansing, MI 48910

Independent Registered Public Accounting Firm

BDO USA, LLP
200 Ottawa Avenue N.W.
Suite 300
Grand Rapids, MI 49503

Stock Transfer Agent and Registrar

American Stock Transfer and Trust Co.
6201 15th Avenue
Brooklyn, NY 11219

Legal Counsel

Lowe Law Firm, P.C.
2375 Woodlake Drive
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Okemos, MI 48864

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blog