UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 10-K

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

For the Fiscal Year Ended May 31, 2020

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

For The Transition Period From _____To _____.

COMMISSION FILE NUMBER 0-17988

NEOGEN CORPORATION
(Exact name of registrant as specified in its charter)

MICHIGAN	**38-2367843**
(State of other jurisdiction of incorporation organization)	**(I.R.S. Employer Identification No.)**

620 Lesher Place
Lansing, Michigan 48912
(Address of principal executive offices, including zip code)

517-372-9200
(Registrant's telephone number, including area code)

SECURITIES REGISTERED PURSUANT TO SECTION 12(b) OF THE ACT:

Title of each Class	Trading Symbol(s)	Name of each exchange on which registered

SECURITIES REGISTERED PURSUANT TO SECTION 12(g) OF THE ACT:
COMMON STOCK, $0.16 par value per share
(Title of Class)

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

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

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

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

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

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

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

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☒

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

Based on the closing sale price on November 30, 2019 the aggregate market value of the voting stock held by non-affiliates of the registrant was $3,489,079,000. For these purposes, the registrant considers its Directors and executive officers to be its only affiliates.

The number of outstanding shares of the registrant's Common Stock was 52,963,988 on June 30, 2020.

DOCUMENTS INCORPORATED BY REFERENCE

Certain portions of the registrant's definitive proxy statement to be prepared pursuant to Regulation 14a and filed in connection with solicitation of proxies for its October 8, 2020 annual meeting of shareholders are incorporated by reference into part III of the Form 10-K.

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CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING INFORMATION

Forward-looking statements, within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, are made throughout this Annual Report on Form 10-K, including statements relating to management's expectations regarding new product introductions; the adequacy of our sources for certain components, raw materials and finished products; and our ability to utilize certain inventory. For this purpose, 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. These forward-looking statements are intended to provide our current expectations or forecasts of future events; are based on current estimates, projections, beliefs, and assumptions; and are not guarantees of future performance. Actual events or results may differ materially from those described in the 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, effects of the ongoing COVID-19 pandemic on our business, results of operations, liquidity, financial condition, and stock price, 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.

In addition, any forward-looking statements represent management's views only as of the day this Annual Report on 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 management may elect to update forward-looking statements at some point in the future, it specifically disclaims any obligation to do so, even if its views change.

As used in this Annual Report on Form 10-K, the terms "Neogen," "the Company," "we," "us," and "our" refer to Neogen Corporation and, where appropriate, its consolidated subsidiaries, unless the context indicates otherwise.

PART I

ITEM 1. BUSINESS

Neogen Corporation and subsidiaries develop, manufacture and market a diverse line of products and services dedicated to food and animal safety. Our Food Safety segment consists primarily of diagnostic test kits and complementary products (e.g., culture media) sold to food producers and processors to detect dangerous and/or unintended substances in human food and animal feed, such as foodborne pathogens, spoilage organisms, natural toxins, food allergens, genetic modifications, ruminant by-products, meat speciation, drug residues, pesticide residues and general sanitation concerns. Our diagnostic test kits are generally easier to use and provide greater accuracy and speed than conventional diagnostic methods. The majority of the test kits are disposable, single-use, immunoassay and DNA detection products that rely on our proprietary antibodies and RNA and DNA testing methodologies to produce rapid and accurate test results. Our expanding line of food safety products also includes genomics-based diagnostic technology, and advanced software systems that help testers to objectively analyze and store their results and perform analysis on the results from multiple locations over extended periods.

Neogen's Animal Safety segment is engaged in the development, manufacture, marketing and distribution of veterinary instruments, pharmaceuticals, vaccines, topicals, diagnostic products, rodenticides, cleaners, disinfectants, insecticides and genomics testing services for the worldwide animal safety market. The majority of these consumable products are marketed through veterinarians, retailers, livestock producers and animal health product distributors. Our USDA-licensed facility in Lansing, Michigan, produces immunostimulant products for horses and dogs, and a unique equine botulism vaccine. Our line of drug detection products is sold worldwide for the detection of abused and therapeutic drugs in animals and animal products, and has expanded into the workplace and human forensic markets.

Neogen's products are marketed by our sales personnel in the U.S., Canada, Mexico, Central America, Brazil, Argentina, Uruguay, Chile, the United Kingdom and other parts of Europe, China, India and Australia, and by distributors throughout the rest of the world.

Our mission is to be the leading company in the development and marketing of solutions for food and animal safety. To meet this mission, a growth strategy consisting of the following elements has been developed: (i) increasing sales of existing products; (ii) introducing new products and services; (iii) growing international sales; and (iv) acquiring businesses and forming strategic alliances. We have historically been successful at increasing product sales organically, including international growth, and maintain an active acquisition program to identify and capitalize on opportunities to acquire new products, businesses, or technology.

Neogen Corporation was formed as a Michigan corporation in June 1981 and operations began in 1982. Our principal executive offices are located at 620 Lesher Place, Lansing, Michigan 48912-1595 and our telephone number is (517) 372-9200.

Neogen's Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, and amendments to those reports are available free of charge via our website (www.neogen.com) as soon as reasonably practicable after such information is filed with, or furnished to, the United States Securities and Exchange Commission. The content of our website or the website of any third party that may be noted herein is not incorporated by reference in this Form 10-K.

PRODUCTS

Product trademarks and registered trademarks owned by Neogen include:

CORPORATE: Neogen®, Neogen flask (logo)®, Neogen and flask (logo)®;

FOOD SAFETY: AccuClean®, AccuPoint®, AccuScan®, Acumedia®, Agri-Screen®, Alert®, ANSR® , BetaStar®, BioLumix® , Colitag™, F.A.S.T.®, GeneQuence®, GENE-TRAK®, Harlequin®, ISO-GRID®, Lab M®, *Listeria* Right Now™, MPNPlate™, MPNTray™, NeoCare™, NeoColumn™, NeoFilm®, NeoNet®, NeoSeek™, NEO-GRID®, Penzyme®, Raptor®, Reveal®, Soleris®, µPREP®, Veratox® , Simple. Accurate. Supported. Food Safety Solutions℠;

LIFE SCIENCES: Alert®, K-Blue®, K-Blue Substrate®, K-Gold®, NeoSal®;

ANIMAL SAFETY: Acid-A-Foam™, Aero-ssault™, Ag-Tek®, AluShield™, AquaPrime®, Assault®, Barnstorm®, BioCres™ 50, BioPhene™, BioQuat™, BotVax®, Breeder-Sleeve®, Calf Eze™, Chem-Tech, Ltd.™, Chem-Tech's CT logo (with circle)™, Chlor-A-Foam™, COMPANION™, CT-511®, Cykill™, D3™ Needles, DC&R®, DeciMax®, Di-Kill®, Dr. Frank's®, Dy-Fly®, Dyne-O-Might®, Earth City Resources (design)®, ElectroJac®, ELISA Technologies (design)®, EqStim®, EquiSleeve®, E-Z Bond™, E-Z Catch®, Farm-Foam™, Farmphene®, Final-Fly-T®, Fly-Die Defense™, Fly-Die Ultra™, Fura-Zone®, GenQuat™, Horse Sense®, Ideal®, ImmunoRegulin®, Insectrin®, Insight™, Iodis®, Jolt®, LD-44®, LD-44T™, Maxi Sleeve®, MaxKlor®, MegaShot™, MycAseptic™, NeedleGard™, Neogen® Viroxide Super™, Neogen® Viroxide Super and flask (design)™, NFZ™, Nu Dyne®, PanaKare™, Pantek™, ParlorMint™, Parvosol®, Peraside™, Place Pack®, PolyPetite™, PolyShield™, PolySleeve®, Preserve®, Preserve International®, Preserve International(design)®, Prima®, Prima Marc™, Prima-Shot™, Prima Tech®, Prima Tech logo®, Pro-Fix®, Pro-Flex®, Promar™, Pro-Shot™, PRO-TECT 6 MIL®, Prozap®, Prozap (stylized mark w/fancy Z)™, PY-75™, Ramik®, Rat & Mouse-A-Rest II®, RenaKare™, Rodent Elimination

Station™, Rodex™, Rot-Not™, Safe-T-Flex™, Siloxycide®, Spectrasol™, Spec-Tuss™, Squire®, Starlicide®, Stress-Dex®, SureBond®, SureKill®, Swine-O-Dyne®, Synergize®, SyrVet®, Tetrabase®, Tetracid®, Tetradyne®, ThyroKare™, TopHoof™, Tri-Hist®, Tri-Seal™, Tryad®, Turbocide®, Turbocide Gold®, Uniprim®, UriKare™, VAP-5™, VAP-20™, Vet-Tie™, Vita-15™, War Paint®, X-185™, Zipcide®;

GENOMICS: Deoxi™, Envigor™, GeneSeek®, Genomic Profiler™, Genomic Insight for Personalized Care™, Genomic Solutions for Food Security®, Igenity®, SeekGain™, SeekSire™, SeekTrace™, Tru-Polled®;

LOGOTYPES: BioSentry barn logo®, BioSentry chicken logo®, BioSentry pig logo®, Circular design®, TurboCide® (stylized), D3 color mark – red™.

Neogen operates in two business areas: the Food Safety and the Animal Safety segments. See Notes to Consolidated Financial Statements elsewhere in this Form 10-K for financial information about our business segments and international operations.

FOOD SAFETY SEGMENT

Neogen's Food Safety segment is primarily engaged in the production and marketing of diagnostic test kits and complementary products marketed to food and feed producers and processors to detect dangerous and/or unintended substances in food and animal feed, such as foodborne pathogens, spoilage organisms, natural toxins, food allergens, genetic modifications, ruminant by-products, meat speciation, drug residues, pesticide residues and general sanitation concerns. Our test kits are used to detect potential hazards or unintended substances in food and animal feed by testers ranging from small local grain elevators to the largest, best-known food and feed processors in the world, and numerous regulatory agencies. Neogen's products include tests for:

Mycotoxins. Grain producers and processors of all types and sizes use our Veratox, Agri-Screen, Reveal, Reveal Q+ and Reveal Q+ MAX tests to detect the presence of mycotoxins, including aflatoxin, aflatoxin M1, deoxynivalenol, fumonisin, ochratoxin, zearalenone, T-2/HT-2 toxin and ergot alkaloid, to help ensure product safety and quality in food and animal feed.

Food allergens. The world's largest producers of cookies, crackers, candy, ice cream and many other processed foods use our Veratox, Alert, Reveal, Reveal 3-D and BioKits testing products to help protect their food-allergic customers from the inadvertent contamination of products with food allergens, including but not limited to peanut, milk, egg, almond, gliadin (gluten), soy, hazelnut and coconut residues.

Dairy antibiotics. Dairy processors are the primary users of Neogen's BetaStar S, BetaStar Advanced and BetaStar 4D diagnostic tests to detect the presence of veterinary antibiotics in milk. The presence of these drugs above a certain level in milk is a public health hazard and an economic risk to producers as it limits the milk's further processing.

Foodborne pathogens. Meat and poultry processors, seafood processors, fruit and vegetable producers and many other market segments are the primary users of Neogen's ANSR and Reveal tests for foodborne bacteria, including *E. coli* O157:H7, *Salmonella*, *Listeria* and *Campylobacter*. Neogen's ANSR pathogen detection system is an isothermal amplification reaction test method which exponentially amplifies the DNA of any bacteria present in food and environmental samples to detectable levels in 10 minutes. Combined with ANSR's single enrichment step, Neogen's pathogen detection method provides DNA-definitive results in a fraction of the time of other molecular detection methods. Our *Listeria* Right Now test detects the pathogen in less than 60 minutes without sample enrichment. Reveal's lateral flow device combines an immunoassay with chromatography for a rapid and accurate one-step result.

Spoilage microorganisms. Neogen's Soleris products are used by food processors to identify the presence of spoilage organisms (e.g., yeast and mold) and other microbiological contamination in food. The systems measure microbial growth by monitoring biochemical reactions that generate a color change in the media as microorganisms grow. The sensitivity of the system allows detection in a fraction of the time needed for traditional methods, with less labor and handling time. Our NeoSeek genomics services utilize a novel application of 16s metagenomics to determine all bacteria in a sample, without introducing biases from culture media, and without the need to generate a bacterial isolate for each possible microbe in a sample.

Sanitation monitoring. Neogen manufactures and markets our AccuPoint Advanced rapid sanitation test to detect the presence of adenosine triphosphate (ATP), a chemical found in all living cells. This easy-to-use and inexpensive test uses bioluminescence to quickly determine if a contact surface has been completely sanitized. When ATP comes into contact with reagents contained in the test device, a reaction takes place that produces light. More light is indicative of higher levels of ATP and a need for more thorough sanitation. Our worldwide customer base for ATP sanitation testing products includes food and beverage processors, the food service and healthcare industries, as well as many other users.

Seafood contaminants. Neogen's specialty products for the seafood market include tests for histamine, a highly allergenic substance that occurs when certain species of fish begin to decay; sulfite, an effective but potentially allergenic shrimp preservative; and shellfish toxins. Neogen's Reveal lateral flow tests for shellfish toxins include rapid tests to detect the toxins that cause amnesic shellfish poisoning (ASP), diarrhetic shellfish poisoning (DSP) and paralytic shellfish poisoning (PSP).

Waterborne microorganisms. Neogen offers the food and beverage industries, including water companies, several platforms for performing the microbial analysis of water. This includes Neogen's filter tests, which are a combination of Neogen Filter membrane filtration and Neogen Culture Media ampouled media, and easy-to-use Colitag product. With Colitag, after an incubation period, the sample changes color in the presence of coliforms and fluoresces in the presence of *E. coli*.

Neogen's Food Safety group also offers:

Culture media. Neogen Culture Media, formerly Neogen's Acumedia and Lab M products, offers culture media and prepared media for varied purposes, including traditional bacterial testing and the growth of beneficial bacteria, such as cultures for sausages and beer. Our customers for culture media also include commercial and research laboratories and producers of pharmaceuticals, cosmetics and veterinary vaccines.

Laboratory services. Neogen offers food safety analysis services in the U.S., United Kingdom (U.K.) and India. These ISO accredited laboratories offer a variety of fee for service tests for the food and feed industry.

The majority of Neogen's food safety test kits use immunoassay technology to rapidly detect target substances. Our ability to produce high quality antibodies sets our products apart from immunoassay test kits produced and sold by other companies. Our kits are available in microwell formats, which allow for automated and rapid processing of a large number of samples, and lateral flow and other similar devices that provide distinct visual results. Typically, test kits use antibody-coated test devices and chemical reagents to indicate a positive or negative result for the presence of a target substance in a test sample; the simplicity of the tests makes them accessible to all levels of food producers, processors and handlers. Neogen also offers other test methods and products to complement its immunoassay tests.

Our test kits are generally based on internally developed technology, licensed technology, or technology that is acquired in connection with acquisitions. In fiscal 2020, the Food Safety segment incurred expense totaling $2,040,000 for royalties for licensed technology used in our products, including expense of $822,000 for allergen products, $426,000 for the pathogen product line and $257,000 related to the dairy antibiotics product line. Generally, royalty rates are in the range of 2% to 10% of revenues on products containing the licensed technology. Some licenses involve technology that is exclusive to Neogen's use, while others are non-exclusive and involve technology licensed to multiple licensees.

Neogen's international operations in the U.K., Mexico, Brazil, China and India originally focused on food safety products, and each of these units reports through the Food Safety segment. In recent years, these operations have expanded to offer our 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 at our international operations, and report through the Food Safety segment.

Revenues from Neogen's Food Safety segment accounted for 50.9%, 51.5%, and 48.9% of our total revenues for fiscal years ended May 31, 2020, 2019 and 2018, respectively.

ANIMAL SAFETY SEGMENT

Neogen's Animal Safety segment is primarily engaged in the development, manufacture, marketing and distribution of veterinary instruments, pharmaceuticals, vaccines, topicals, diagnostic products, a full suite of agricultural biosecurity products such as rodenticides, cleaners, disinfectants and insecticides, and genomics services.

Veterinary instruments. Neogen markets a broad line of veterinary instruments and animal health delivery systems under the Ideal brand name. Approximately 250 different products are offered, many of which are used to deliver animal health products, such as antibiotics and vaccines. Ideal's D3 Needles are stronger than conventional veterinary needles and are uniquely detectable by metal detectors at meat processing facilities — a potential market advantage in the safety-conscious beef and swine industries. Neogen's Prima Tech product line consists of highly accurate devices used by farmers, ranchers and veterinarians to inject animals, provide topical applications and to use for oral administration. Prima Tech is also a supplier of products used in artificial insemination in the swine industry. Other products include animal identification and handling equipment.

Veterinary pharmaceuticals. Animal Safety's NeogenVet product line provides innovative, value-added, high quality products to the veterinary market. Top NeogenVet products include PanaKare, a digestive aid that serves as a replacement therapy where digestion of protein, carbohydrate and fat is inadequate due to exocrine pancreatic insufficiency; Natural Vitamin E-AD, which aids in the prevention and treatment of vitamin deficiencies in swine, cattle and sheep; and RenaKare, a supplement for potassium deficiency in cats and dogs. Other products sold under the NeogenVet brand include Vita-15 and Liver 7, which are used in the treatment and prevention of nutritional deficiencies. We also manufacture and market Uniprim, a veterinary antibiotic.

Veterinary biologics. Neogen's BotVax B vaccine has successfully protected thousands of horses and foals against Type B botulism, commonly known as Shaker Foal Syndrome. Our product is the only USDA-approved vaccine for the prevention of Type B botulism in horses. Years of research and

many thousands of doses have proven Neogen's EqStim immunostimulant to be safe and effective as a veterinarian-administered adjunct to conventional treatment of equine bacterial and viral respiratory infections. Our ImmunoRegulin product uses similar immunostimulant technology to aid in the treatment of pyoderma (a bacterial skin inflammation) in dogs.

Veterinary OTC products. Animal Safety products offered by Neogen to the retail over-the-counter (OTC) market include Ideal brand veterinary instruments packaged for the retail market. OTC products also include Stress-Dex, an oral electrolyte replacer for performance horses, and Fura-Zone, for the prevention and treatment of surface bacterial infections in wounds, burns and cutaneous ulcers. Hoof care, disposables and artificial insemination supplies are marketed to the dairy and veterinary industries.

Rodenticides. Neogen's comprehensive line of proven rodenticides, sold under brand names such as Ramik and Havoc, effectively address rodent problems of any size and serve as a critical component of an overall biosecurity plan for animal protein production operations. Neogen offers several rodenticide active ingredients including diphacinone, bromethalin, brodifacoum, and zinc phosphide formulated with food grade ingredients to generate the highest acceptance and most palatable bait possible.

Cleaners and disinfectants. Used in animal and food production facilities, Neogen's cleaners and disinfectants, including 904 Disinfectant, Acid-A-Foam, Synergize, BioPhene, Neogen Viroxide Super and FarmFluid S, can stop a disease outbreak before it starts. The products are also used in the veterinary clinic market to maintain sanitary conditions and limit the potential hazards of bacteria, fungi and viruses. Neogen's water line cleaner and disinfectant products, including Peraside, NeoKlor, AquaPrime and Siloxycide, clean water lines, and provide continuous disinfection of a livestock facility's water supply.

Insecticides. Neogen's highly effective insecticides utilize environmentally friendly technical formulas, and several are approved for use in food establishments and by pest control professionals in a wide range of environments. The Company's Prozap insecticide brand is used in the large animal production industry, particularly with dairy and equine producers. Neogen's SureKill line of products is used by professionals to control a variety of insects.

Animal genomics services. Neogen Genomics, formerly known as GeneSeek, provides value-added services to leading agricultural genetics providers, large national cattle associations, companion animal breed registries and direct to consumer canine genetic test providers, university researchers, and numerous commercial beef and dairy cattle, swine, sheep and poultry producers. With state-of-the-art genomics laboratories and the comprehensive bioinformatics to interpret genomics test results, Neogen Genomics offers identity and trait determination and analysis. Our technology employs high-density DNA genotyping and genomic sequencing for identity and trait analysis in a variety of important animal and agricultural plant species. Our extensive bioinformatics database identifies and predicts an animal's positive or negative traits based on DNA test results. This information has helped livestock producers increase the speed of genetic improvement in their herds and overall performance and quality of their animals.

Life sciences. Neogen's line of approximately 100 drug detection immunoassay test kits is sold worldwide for the detection of approximately 300 abused and therapeutic drugs in farm animals and racing animals, and for the detection of drug residues in meat and meat products. The test kits are also used for human forensic toxicology drug screening applications. This line includes tests for narcotics, analgesics, stimulants, depressants, tranquilizers, anesthetics, steroids and diuretics. Neogen also has several products used by researchers for the detection of biologically active substances.

Many of the products and services in the Animal Safety segment use licensed technology. In fiscal year 2020, Animal Safety incurred expense totaling $484,000 for royalties for licensed technology used in our products and services, including expense of $213,000 related to the genomics services line.

Neogen's operation in Australia originally focused on providing genomics services and sales of animal safety products and reports through the Animal Safety segment. With the acquisition of Cell BioSciences in February 2020, our Australian operation has expanded to offer our complete line of products and services, including those usually associated with the Food Safety segment. These additional products are managed and directed by existing management at Neogen Australasia and report through the Animal Safety segment.

Revenues from Neogen's Animal Safety segment accounted for 49.1%, 48.5%, and 51.1% of our total revenues for fiscal years ended May 31, 2020, 2019 and 2018, respectively.

GENERAL SALES AND MARKETING

Neogen is organized under two segments — Food Safety and Animal Safety. Within these segments, our sales efforts are generally organized by specific markets, rather than by products or geography. During the fiscal year that ended May 31, 2020, we had approximately 28,000 customers for our products. Since many of our customers are distributors, and certain animal safety products are offered to the general retail market, the total number of end users of our products is considerably greater than 28,000. As of May 31, 2020, a total of 379 employees were assigned to sales and marketing functions, compared to 359 at the end of May 2019. During the fiscal years ended May 31, 2020, 2019 and 2018, no single customer or distributor accounted for 10% or more of our revenues.

DOMESTIC SALES AND MARKETING

FOOD SAFETY

To reach each customer and prospect with expertise and experience, Neogen has a staff of specialized food safety sales and technical service representatives assigned to specific markets. This staff sells our products directly to end users, and also handles technical support issues that arise with customers in the United States.

Neogen's food safety markets are primarily comprised of:

- **Milling and grain**, including grain elevators, feed mills, pet food manufacturers, and grain inspection companies;
- **Meat and poultry**, including meat and poultry processors, producers of ready-to-eat meat and poultry products, and the USDA's Food Safety Inspection Service (FSIS);
- **Prepared foods and ingredients**, including flour millers, malters, bakeries, candy and confection manufacturers, manufacturers of prepared meals, nuts, spices, cookies, crackers and other snack foods;
- **Fruits and vegetables**, including growers and processors of juice and packaged fresh cut grocery items;
- **Seafood**, including harvesters and processors of a wide variety of seafood products;
- **Dairy**, including milk and yogurt processors;
- **Beverage**, including soft drink bottlers and beer and wine producers;
- **Water,** including food producers, water bottlers and municipal water departments;
- **Healthcare**, including hospitals and distributors to the healthcare industry;
- **Traditional culture media markets**, including commercial and research laboratories and producers of pharmaceuticals, cosmetics and veterinary vaccines;
- **Food service**, including fast food service establishments and retail grocery market chains; and
- **Nutraceuticals**, including producers and marketers of a wide variety of nutritional and holistic consumer products.

ANIMAL SAFETY

Neogen's staff of specialized animal safety sales, marketing, customer and technical service representatives sell our products and services directly to consumers, dealers, veterinarians, distributors and other manufacturers and also handle domestic technical support issues. Neogen further supports its distribution channels through product training, field support, various promotions and advertising.

Neogen's animal safety markets are primarily comprised of:

- **Companion animal veterinarians.** Neogen has a dedicated sales group that sells and technically supports the Company's animal care, biosecurity and disposable products to the companion animal veterinary market.
- **Livestock producers, veterinarians and breed associations.** Neogen has a dedicated group of sales professionals that sells the Company's comprehensive suite of biosecurity and husbandry products and genomics services directly to livestock producers, and livestock veterinarians and veterinary clinics.
- **Distributors.** To expand the reach of its animal safety OTC and veterinary products, Neogen has a dedicated sales team that sells the Company's products to animal health product distributors.
- **Retailers.** Neogen offers select animal care and biosecurity products directly to large farm and ranch retailers for sale to consumers.
- **Breeding and genetics companies.** Neogen has sales professionals who sell directly to the large dairy artificial insemination providers, poultry and swine genetics companies and the aquaculture industry.
- **Diagnostic labs and universities.** Neogen has a dedicated lab, manufacturing, sales and technical service group that call on large commercial and forensic testing laboratories and universities.
- **Other manufacturers and government agencies.** Neogen has an experienced group of professionals who work directly with other manufacturers and government agencies to provide custom solution products and services for their needs.

INTERNATIONAL SALES AND MARKETING

Neogen maintains 15 Company-owned locations outside of the United States to provide a direct presence in regions of particular importance to us; we maintain an extensive network of distributors to reach countries where we do not have a direct presence.

Neogen Europe and subsidiaries. Neogen Europe, Ltd., located in Ayr, Scotland, sells products and services to our network of customers and distributors throughout the United Kingdom (U.K.), Europe, the Middle East and Africa. Customers in the U.K., France, Germany, Italy and the Netherlands are served by our employees. In other regions, customers are generally serviced by distributors managed by Neogen Europe personnel. Neogen Europe's research and development team continues to be a strong asset in the development of products tailored to meet the unique requirements of the European market.

Neogen Europe management is also responsible for Neogen's other Europe-based operations, which include:

- Lab M Ltd., located in Heywood, England, which manufactures an extensive range of microbiological culture media, supplements and immunomagnetic separation techniques; its proficiency testing systems are used in laboratories around the world.
- Quat-Chem Ltd., a Rochdale, England-based chemical company that specializes in the development, manufacture and sale of agricultural, industrial, and food processing biocidal hygiene products, including cleaners and disinfectants. Quat-Chem sells its products on a global basis, with a focus on markets in the U.K., E.U., Middle East and Asia.
- Neogen Italia, a Milan, Italy-based business acquired in January 2020, directly markets and sells Neogen's products in Italy.
- Abtek (Biologicals) Ltd., acquired in February 2020, a developer and supplier of culture media supplements and microbiology technologies. With the acquisition, Abtek's Liverpool operations became Neogen's third global microbiology manufacturing facility, joining locations in Lansing and Heywood.

Neogen Latinoamérica. Neogen Latinoamérica is headquartered near Mexico City and distributes Neogen's products throughout Mexico and Central America. Neogen Latinoamérica manages our business activities throughout the region by marketing to animal and crop producers and food processors, utilizing our direct sales representatives to sell Food Safety products and genomics services, while marketing cleaners, disinfectants and other Animal Safety products primarily through distributors.

Neogen Argentina, Neogen Uruguay and Neogen Chile. In January 2020, Neogen acquired Productos Quimicos Magiar and Lakenord S.A. (Magiar Uruguay), distributors of Neogen's food safety diagnostics products for the previous 20 years, with operations in Argentina and Uruguay, respectively. In March 2020, Neogen acquired the assets of Chile-based Magiar Chilena, a distributor of food, animal, and plant diagnostics, including Neogen products. With the acquisitions, the former Magiar operations remain in the three countries and provide Neogen with a physical presence in the important agricultural Southern Cone region of South America, which has large beef and dairy populations with significant export markets. The operations are managed through Neogen's Latin American operations and offer direct sales of Neogen food safety, animal safety and genomics products into Argentina, Uruguay and Chile.

Neogen do Brasil. Neogen do Brasil, headquartered near São Paulo, distributes Neogen's products throughout Brazil. Brazil is one of the world leaders in the export of numerous food commodities, including beef, poultry, soybeans, coffee, sugar and orange juice, and this operation gives us direct sales representation to these important markets. Neogen do Brasil management is also responsible for sales and marketing for Rogama, located in Pindamonhangaba, Brazil. This company operates a genomics testing laboratory (formerly named Deoxi) and develops, manufactures and markets rodenticides and insecticides. Rogama offers more than 70 registered pest control products to Brazil's agronomic, professional and retail markets.

Neogen China. Our Chinese subsidiary, located in Shanghai, employs sales representatives who sell directly to Chinese customers. China's burgeoning middle class, with its rapidly growing demand for higher quality meat and dairy products, makes the country a growth opportunity for Neogen's products and services — both for animal production on the country's farms, and in processing plants throughout China's food production and distribution channels. We utilize both direct sales representatives and distributors to sell our complete portfolio in this growing market.

Neogen India. This business operates an accredited laboratory which performs food safety and water quality testing for food producers, major hotels and restaurants in its home region, as well as safety and quality analysis for the country's expanding nutraceutical market, and growing food export businesses. The laboratory is located in Kochi, in the state of Kerala, which is India's leading region for the export of spices, tea, and fresh fruits and vegetables. Neogen India is also responsible for sales of our food safety and animal safety products to customers and distributors in India and nearby countries.

Neogen Australasia. Neogen Australasia operates a genomics testing laboratory, focusing on the sheep and cattle markets in Australia and New Zealand, and also markets and sells our animal safety products in those countries. In February 2020, the Company acquired the assets of Cell BioSciences, an Australian distributor of food safety and industrial microbiology products. This acquisition has given Neogen a direct sales presence across Australasia for its entire product portfolio.

Neogen Canada. In January 2019, Neogen acquired the assets of the Edmonton-based Delta Genomics Centre, a major animal genomics laboratory in Canada. With the acquisition, Delta's laboratory operations were renamed Neogen Canada, and became Neogen's sixth animal genomics laboratory, joining locations in the U.S., Scotland, Brazil, China and Australia.

Other distributor partners. Outside of our physical locations, Neogen uses our own sales managers in both the Food Safety and Animal Safety segments to work closely with and coordinate the efforts of a network of approximately 200 distributors in more than 100 countries. The distributors provide local training and technical support, perform market research and promote Company products within designated countries around the world.

Sales to customers outside the United States accounted for 39.4%, 40.1%, and 37.6% of our total revenues for fiscal years ended May 31, 2020, 2019 and 2018, respectively. No individual foreign country contributed 10% or more of our revenues for those same periods.

RESEARCH AND DEVELOPMENT

Management maintains a strong commitment to Neogen's research and development activities. Our product development efforts are focused on the enhancement of existing products and in the development of new products that fit our business strategy. As of May 31, 2020, we employed 89 individuals in our worldwide research and development group, including immunologists, chemists and microbiologists. Research and development costs were approximately $14.8 million, $12.8 million, and $10.9 million representing 3.5%, 3.1%, and 2.7% of total revenues in fiscal years 2020, 2019 and 2018, respectively. Management currently expects our future research and development expenditures to approximate 3% of total revenues annually.

Neogen has ongoing development projects for several new and improved diagnostic tests, readers and other complementary products for both the Food Safety and Animal Safety markets. Management expects that a number of these products will be commercially available at various times during fiscal years 2021 and 2022.

Portions of certain technologies utilized in some products manufactured and marketed by Neogen were acquired from or developed in collaboration with affiliated partners, independent scientists, governmental units, universities and other third parties. We have entered into agreements with these parties that provide for the payment of royalties based upon sales of products that utilize the pertinent licensed technology. Royalties, expensed to sales and marketing, under these agreements amounted to $2,524,000, $2,795,000, and $2,876,000 in fiscal years 2020, 2019 and 2018, respectively.

PROPRIETARY PROTECTION AND APPROVALS

Neogen uses trade secrets as proprietary protection in many of its food and animal safety products. In many cases, we have developed unique antibodies capable of detecting microorganisms and residues at minute levels. The supply of these antibodies, and the proprietary techniques utilized for their development, may offer better protection than filing patents. Such proprietary reagents are maintained in secure facilities and stored in more than one location to reduce exposure to complete destruction by natural disaster or other means.

Patent and trademark applications are submitted whenever appropriate. Since its inception, Neogen has acquired and received numerous patents and trademarks, and has several pending patents and trademarks. The patents expire at various times over the next 23 years.

A summary of patents by product categories follows:

	USA	International	Expiration
Natural Toxins, Allergens, & Drug Residues	21	33	2021-2026
Bacterial & General Sanitation	5	0	2021-2022
Life Sciences	0	4	2024
Vaccine	1	0	2028
Veterinary Instruments & Other	13	44	2020-2042
Genomics Services	18	4	2021-2029

We do not expect the near-term expiration of any single patent to have a significant effect on future results of operations.

Management believes that Neogen has adequate protection regarding proprietary rights for our products. However, we are aware that substantial research has taken place at universities, governmental agencies and other companies throughout the world and that numerous patents have been applied for and issued for technologies which may be used in our products. To the extent some of our products may now, or in the future, embody technologies protected by patents, copyrights or trade secrets of others, we may need to obtain licenses to use such technologies to continue to sell the products. These licenses may not be available on commercially reasonable terms. Failure to obtain any such licenses may delay or prevent the sale of certain new or existing products. In addition, patent litigation is not uncommon. Accordingly, there can be no assurance that our existing patents will be sufficient to completely protect our proprietary rights.

One of the major areas affecting the success of biotechnology development involves the time, cost and uncertainty surrounding regulatory approvals. Neogen products requiring regulatory approval, which we currently have in place, include BotVax B, EqStim, ImmunoRegulin, Uniprim and BetaStar. Our general strategy is to select technical and proprietary products that do not require mandatory approval by regulatory bodies to be marketed. Neogen's rodenticide, disinfectant and insecticide products are subject to registration in the United States and internationally.

Neogen utilizes third-party validations on many of our disposable test kits to provide our customers with assurances that our products perform to specified levels. These include validation by the AOAC International, independently administered third-party, multi-laboratory collaborative studies and approvals by the USDA Food Safety Inspection Service for the use of our products in their operations.

PRODUCTION AND SUPPLY

Neogen manufactures our products in Michigan, Kentucky, Wisconsin, North Carolina, Iowa, Tennessee, California, the United Kingdom and Brazil and provides genomics services in Nebraska, Scotland, Brazil, Australia, China and Canada. As of May 31, 2020, there were approximately 965 full-time employees assigned to manufacturing and providing of services in these locations, operating on one or two shifts; with occasional 24/7 production during high demand periods. Future demand increases could be accommodated by adding shifts. Management believes we could increase the current output of our primary product lines by more than 50% using the current space available; however, to do so would require investment in additional equipment.

Food safety diagnostics. Manufacturing of diagnostic tests for the detection of natural toxins, pathogens, food allergens, dairy antibiotics, spoilage organisms and pesticides, final kit assembly, quality assurance and shipping takes place at our facilities in Lansing, Michigan. Proprietary monoclonal and polyclonal antibodies for Neogen's diagnostic kits are produced on a regular schedule in our immunology laboratories in Lansing. Generally, final assembly and shipment of diagnostic test kits to customers in Europe is performed in our Ayr, Scotland facility. Most of the Company's food safety diagnostic instruments and readers are produced by third-party vendors to our specifications, quality tested in Lansing, and then shipped to customers. Culture media products are manufactured in an ISO-approved facility in Lansing and in Heywood and Liverpool, England. Products are blended following strict formulations or custom blended to customer specifications and shipped directly to customers from Lansing and the United Kingdom. The Heywood location produces prepared media plates, sterile liquid media, and other related products in ready to use format for the food testing laboratories across the U.K. and western Europe.

Animal health products. Manufacturing of animal health products, pharmacological diagnostic test kits and test kits for drug residues takes place in our FDA-registered facilities in Lexington, Kentucky. In general, manufacturing operations including reagent manufacturing, quality assurance, final kit assembly and packaging are performed by Neogen personnel. Certain animal health products and veterinary instruments that are purchased finished or that are toll manufactured by third party vendors are warehoused and shipped from our Lexington facilities. Other veterinary instruments are produced in our facilities in Lansing, and are generally then shipped to Lexington for distribution to customers. Manufacturing and shipment of devices used for animal injections, topical applications and oral administration occurs in Kenansville, North Carolina.

Veterinary biologics. Neogen maintains a Lansing-based USDA-approved manufacturing facility devoted to the production of the biologic products EqStim and ImmunoRegulin. *P.acnes* seed cultures are added to media and then subjected to several stages of further processing resulting in a finished product that is filled and packaged within the facility. Our BotVax B vaccine is also produced in the Lansing facility utilizing Type B botulism seed cultures and a traditional fermentation process. All completed biologic products are then shipped to Neogen's Lexington facilities where they are inventoried prior to distribution to customers.

Agricultural genomics services. Neogen offers agricultural genomics laboratory services and bioinformatics at our locations in Nebraska, Scotland, Brazil, Australia, China and Canada. Through our laboratory services and bioinformatics (primarily in beef and dairy cattle, pigs, sheep, poultry, horses and dogs), Neogen Genomics allows our customers to speed genetic improvement efforts, as well as identify economically important diseases.

Cleaners, disinfectants and rodenticides. Manufacturing of rodenticides and/or cleaners and disinfectants takes place in the following locations: Randolph, Wisconsin; Memphis, Tennessee; Turlock, California; Rochdale, England; and Pindamonhangaba, Brazil. Manufacturing of rodenticides consists of blending technical material (active ingredient) with bait consisting principally of various grains. Certain cleaners and disinfectants are manufactured in Neogen facilities, while others are purchased from other manufacturers for resale, or toll manufactured by third parties.

Insecticides. Neogen manufactures insecticides and other pesticides at its facilities in Pleasantville, Iowa and Pindamonhangaba, Brazil.

Neogen purchases component parts and raw materials from more than 1,000 suppliers. Though many of these items are purchased from a single source to achieve the greatest volume discounts, we believe we have identified acceptable alternative suppliers for most of our key components and raw materials where it is economically feasible to do so. There can be no assurance that we would avoid a disruption of supply in the event a supplier discontinues shipment of product. Shipments of products are generally accomplished within a 48-hour turnaround time. Because of this quick response time, our backlog of unshipped orders at any given time has historically not been significant.

COMPETITION

Although competitors vary in individual markets, management knows of no competitor that is pursuing Neogen's fundamental strategy of developing and marketing a broad line of products, ranging from disposable tests and culture media to veterinary pharmaceuticals and instruments for a large number of food safety and animal safety concerns. For each of our individual products or product lines, we face intense competition from companies ranging from small businesses to divisions of large multinational companies. Some of these organizations have substantially greater financial resources than Neogen. We compete primarily on the basis of ease of use, speed, accuracy and other similar performance characteristics of our products. The breadth of our product line, the effectiveness of our sales and customer service organizations, and pricing are also components in management's competitive strategy.

Future competition may become even more intense, and could result from the development of new technologies, which could affect the marketability and profitability of Neogen's products. Our competitive position will also depend on our ability to continue to develop proprietary products, attract and retain qualified scientific and other personnel, develop and implement production and marketing plans and obtain patent protection for new products. Additionally, we must continue to generate or have access to adequate capital resources to execute our strategy.

FOOD SAFETY:

With a large professional sales organization offering a comprehensive catalog of food safety solutions, management believes we maintain a general advantage over competitors offering only limited product lines. In most cases, Neogen sales and technical service personnel can offer unique insight into a customer's numerous safety and quality challenges, and offer testing and other solutions to help the customer overcome those challenges.

Competition for pathogen detection products includes traditional methods and antibody and genetic-based platforms; competition for natural toxins and allergen detection products include instrumentation and antibody-based tests. While our offerings will not always compete on all platforms in all markets, the products we offer provide tests that can be utilized by most customers to meet their testing needs.

In addition to our extensive product offerings and robust distribution network, we focus our competitive advantage in the areas of customer service, product performance, speed, and ease of use of our products. Additionally, by aggressively maintaining Neogen as a low-cost producer, we believe that we can be competitive with new market entrants that may choose a low pricing strategy in an attempt to gain market share.

ANIMAL SAFETY:

Neogen's Animal Safety segment faces no one competitor across the products and markets we serve. In the racing industry market, we believe we hold a leading market share position. In the life sciences and forensics markets, we compete against several other diagnostic and reagent companies with similar product offerings.

In the veterinary market, Neogen markets BotVax B, the only USDA-approved vaccine for the prevention of botulism Type B in horses. We compete on other key products through differentiated product performance and superior customer and technical support. With some of our products, we provide solutions as a lower cost alternative and also offer a private label option for our distributors.

Competition in the rodenticide market includes several companies of comparable size that offer products into similar market segments. The retail rodenticide market is not dominated by a single brand. While the technical materials used by competing companies are similar, Neogen uses manufacturing and bait formula techniques which we believe may better attract rodents to the product and thereby improves overall product performance.

Within the insecticide market, Chem-Tech products specifically focus on the area of insect control for food and animal safety applications. There are several competitors offering similar products, however, we have a proprietary formulation chemistry that optimizes the delivery and safe application of insecticides at the customer's location. These products are currently only sold in the U.S. through a combination of direct sales and distributors.

Numerous companies, including a number of large multinationals, compete for sales in the cleaner and disinfectant product segment. Neogen's broad line of products are sold through our distributor network around the world, primarily to assist in the cleaning and disinfecting of animal production facilities.

In addition to our extensive portfolio of Animal Safety products, Neogen also competes in the retail market by providing solutions to common retail problems, such as stock outs, wasted floor space and inconsistent brand identity. We differentiate ourselves by offering planograms and convenient reordering systems to maximize turns and profitability for our retail customers.

Neogen Genomics, which includes the leading commercial agricultural genomics laboratory in the U.S., employs cutting-edge technology in the area of genomics. The result of this technology allows the acceleration of natural selection through selective breeding of traits such as disease resistance, yield improvement and meat quality. Competition comes mainly from a number of service providers, some significantly larger than us, as well as several smaller companies offering genomics services. Neogen Genomics is not involved in cloning or the development of transgenic animals.

GOVERNMENT REGULATION

A significant portion of Neogen's products and revenues are affected by the regulations of various domestic and foreign government agencies, including the U.S. Department of Agriculture (USDA), the Environmental Protection Agency (EPA) and the U.S. Food and Drug Administration (FDA). Changes in these regulations could affect revenues and/or costs of production and distribution.

Neogen's development and manufacturing processes involve the use of certain hazardous materials, chemicals and compounds. Management believes that our safety procedures for handling and disposing of such commodities comply with the standards prescribed by federal, state and local regulations; however, changes in such regulations or rules could involve significant costs to us and could be materially adverse to our business.

The rodenticides, insecticides, cleaners, disinfectants and sanitizers manufactured and distributed by Neogen are subject to EPA and various state regulations. In general, any international sale of our products must also comply with similar regulatory requirements in the country of destination. Each country has its own individual regulatory construct with specific requirements (e.g., label in the language of the importing country). To the best of our knowledge, Neogen products are in compliance with applicable regulations in the countries where such products are sold.

Dairy diagnostic products used in National Conference on Interstate Milk Shipments (NCIMS), a cooperative program involving FDA, state governments and the industry, must first be approved. Before products requiring NCIMS approval can be sold in the U.S., extensive product performance data must be submitted in accordance with FDA-approved protocol administered by the AOAC Research Institute (AOAC RI). Following approval of a product by NCIMS, the product must be reviewed by the FDA. Our BetaStar Advanced U.S. dairy antibiotic residue testing product has been reviewed and/or approved by the appropriate regulatory bodies.

Many of the food safety diagnostic products do not require direct government approval. However, we have pursued AOAC approval for a number of these products to enhance their marketability.

Neogen's veterinary vaccine products and some pharmaceutical products require government approval to allow for lawful sales. The vaccine products are approved by the U.S. Department of Agriculture, Center for Veterinary Biologics (USDA-CVB) and the pharmaceutical products are approved by the FDA. The products, and the facilities in which they are manufactured, are in a position of good standing with both agencies. We have no warning letters based on any review of these products or facility inspection, no recalls on any of these products, and are not aware of any reason why we could not manufacture and market such products in the future.

Other animal safety and food safety products generally do not require additional registrations or approvals. However, Neogen's regulatory staff routinely monitors amendments to current regulatory requirements to ensure compliance.

EMPLOYEES

As of May 31, 2020, we employed 1,764 full-time persons worldwide. None of the employees are covered by collective bargaining agreements. There have been no work stoppages or slowdowns due to labor-related problems, and management believes that our relationship with our employees is generally good. Employees with access to proprietary information have executed confidentiality agreements with Neogen.

ITEM 1A. RISK FACTORS

An investment in Neogen Corporation's common shares involves a high degree of risk. The risks described below are not the only ones that an investor faces. Additional risks that are not yet known to us or that we currently think are immaterial could also impair our business, financial condition or results of operations. If any of the following risks actually occurs, our business, financial condition or results of operations could be adversely affected.

Risks Relating to Our Business

The widespread outbreak of an illness or any other communicable disease, or any other public health crisis, could adversely affect our business, results of operations and financial condition.

We could be negatively impacted by the widespread outbreak of an illness or any other communicable disease, or any other public health crisis that results in economic and trade disruptions, including the disruption of global supply chains. In December 2019, an outbreak of a new strain of coronavirus ("COVID-19") began in Wuhan, Hubei Province, China. In March 2020, the World Health Organization declared COVID-19 a pandemic. The COVID-19 pandemic has negatively impacted the global economy, disrupted global supply chains and created significant volatility and disruption of financial markets. The extent of the impact of the COVID-19 pandemic on our operational and financial performance, including our ability to execute our business strategies and initiatives in the expected time frame, will depend on many factors outside our control, including, without limitation, the timing, extent, trajectory and duration of the pandemic, related restrictions on travel and transports, the development and availability of effective treatments and vaccines, the imposition of protective public safety measures, and the impact of the pandemic on the global economy and consumer demand. Additional future impacts to us may include, but are not limited to, material adverse effects on: demand for our products and services; our supply chain, and sales and distribution channels; and our profitability and cost structure. An extended period of global supply chain and economic disruption could materially affect our business, results of operations, and financial condition. The situation is changing rapidly and future impacts may materialize that are not yet known. To the extent the COVID-19 pandemic adversely affects our business, results of operations, financial condition and stock price, it may also have the effect of heightening many of the other risks described in this section.

Our business strategy is dependent on successfully promoting internal growth and identifying and integrating acquisitions.

Our business has grown significantly over the past several years as a result of both internal growth and acquisitions of existing businesses and their products. Management initiatives may be attempted to augment internal growth, such as strengthening our presence in select markets, reallocating research and development funds to higher growth potential products, development of new applications for our technologies, enhancing our service offerings, continuing key customer efforts, and finding new markets for our products. Failure of these management initiatives may have a material adverse effect on our operating results and financial condition.

Identifying and pursuing acquisition opportunities, integrating these acquisitions into our business and managing their growth requires a significant amount of management's time and skill. We cannot assure that we will be effective in identifying, integrating or managing future acquisition targets. Our failure to successfully integrate and manage a future acquisition may have a material adverse effect on our operating results and financial condition.

In addition, if we continue to experience growth in our business, such growth could place a significant strain on our management, customer service, operations, sales and administrative personnel, and other resources. To serve the needs of our existing and future customers we will be required to recruit, train, motivate and manage qualified employees. We have incurred and will continue to incur significant costs to retain qualified management, sales and marketing, engineering, production, manufacturing and administrative personnel, as well as expenses for marketing and promotional activities. Our ability to manage our planned growth depends upon our success in expanding our operating, management, information and financial systems, which might significantly increase our operating expenses.

We may not be able to effectively manage our future growth, and if we fail to do so, our business, financial condition and results of operations could be adversely affected.

We rely significantly on our information systems' infrastructure to support our operations and a failure of these systems and infrastructure and/or a security breach of our information systems could damage our reputation and have an adverse effect on operations and results.

We rely on our information systems' infrastructure to integrate departments and functions, to enhance our ability to service customers, to improve our control environment and to manage our cost reduction initiatives. If a security breach or cyberattack of our IT networks and systems occurs, our operations could be interrupted. Any issues involving our critical business applications and infrastructure may adversely impact our ability to manage our operations and the customers we serve. Although we have controls and security measures in place to prevent such attacks, experienced computer

hackers are increasingly organized and sophisticated. Malicious attack efforts operate on a large-scale and sometimes offer targeted attacks as a paid-for service. In addition, the techniques used to access or sabotage networks change frequently and generally are not recognized until launched against a target.

We rely on several information systems throughout our company, as well as those of our third-party business partners, to provide access to our web-based products and services, keep financial records, analyze results of operations, process customer orders, manage inventory, process shipments to customers, store confidential or proprietary information and operate other critical functions. Although Neogen employs system backup measures and engages in information system redundancy planning and processes, such measures, as well as our current disaster recovery plan, may be ineffective or inadequate to address all vulnerabilities. Further, our information systems and our business partners' and suppliers' information systems may be vulnerable to attacks by hackers and other security breaches, including computer viruses and malware, through the Internet (including via devices and applications connected to the Internet), email attachments and persons with access to these information systems, such as our employees or third parties with whom we do business. As information systems and the use of software and related applications by us, our business partners, suppliers, and customers become more cloud-based, there has been an increase in global cybersecurity vulnerabilities and threats, including more sophisticated and targeted cyber-related attacks that pose a risk to the security of our information systems and networks and the confidentiality, availability and integrity of data and information.

While we have implemented network security and internal control measures, especially for the purpose of protecting our connected products and services from cyberattacks, and invested in our data and information technology infrastructure, there can be no assurance that these efforts will prevent a system disruption, attack, or security breach and, as such, the risk of system disruptions and security breaches from a cyberattack remains.

If our security and information systems are compromised, or employees fail to comply with the applicable laws and regulations, or this information is obtained by unauthorized persons or used inappropriately, it could adversely affect our reputation, as well as results of operations, and could result in litigation, the imposition of penalties, or significant expenditures to remediate any damage to persons whose personal information has been compromised.

In addition, COVID-19 may have an adverse impact on our information technology systems, including telecommuting issues associated with the rapid and broad-based shift in our employee population working remotely, which creates inherent productivity, connectivity and oversight challenges.

Disruption of our manufacturing and service operations could have an adverse effect on our financial condition and results of operations.

We manufacture our products at several manufacturing facilities located in the following locations: Lansing, Michigan; Lexington, Kentucky; Randolph, Wisconsin; Kenansville, North Carolina; Pleasantville, Iowa; Memphis, Tennessee; Turlock, California; Heywood, England; Liverpool, England; Ayr, Scotland; Rochdale, England; and Pindamonhangaba, Brazil. We offer genomics services from facilities located in: Lincoln, Nebraska; Ayr, Scotland; Pindamonhangaba, Brazil; Edmonton, Canada; Shanghai, China; and Gatton, Australia. These facilities and our distribution systems are subject to catastrophic loss due to fire, flood, terrorism or other natural or man-made disasters. If any of these facilities were to experience a catastrophic loss, it could disrupt our operations, delay production, shipments and revenue and result in significant expenses to repair or replace the facility and/or distribution system. If such a disruption were to occur, we could breach agreements, our reputation could be harmed, and our business and operating results could be adversely affected. Although we carry insurance for property damage and business interruption, we do not carry insurance or have financial reserves for interruptions or potential losses arising from terrorism. Economic conditions and uncertainties in global markets may adversely affect the cost and other terms upon which we are able to obtain third party insurance. If we are unable to obtain sufficient and cost-effective third-party insurance coverage, or to the extent we have elected to self-insure, we may be at greater risk that our operations will be harmed by a catastrophic loss.

Our dependence on suppliers could limit our ability to sell certain products or negatively affect our operating results.

We rely on third-party suppliers to provide raw materials and other components in our products, manufacture products that we do not manufacture ourselves and perform services that we do not provide ourselves. Because these suppliers are independent third parties with their own financial objectives, actions taken by them could have a negative effect on our results of operations. The risks of relying on suppliers include our inability to enter into contracts with third party suppliers on reasonable terms, inconsistent or inadequate quality control, relocation of supplier facilities, supplier work stoppages and suppliers' failure to comply with their contractual obligations. In addition, we currently purchase some raw materials and products from sole or single sources. Some of the products that we purchase from these sources are proprietary and, therefore, cannot be readily or easily replaced by alternative sources. Problems with suppliers could negatively impact our ability to supply the market, substantially decrease sales, lead to higher costs or damage our reputation with our customers.

We rely heavily on third-party package delivery services, and a significant disruption in these services or significant increases in prices may disrupt our ability to ship products, increase our costs and lower our profitability.

We ship a significant portion of our products to customers through independent package delivery companies, such as UPS, Federal Express and DHL. We also ship our products through other carriers, including national and regional trucking firms, overnight carrier services and the U.S. Postal Service. If one or more of these third-party package delivery providers were to experience a major work stoppage, preventing our products from being delivered in a timely fashion or causing us to incur additional shipping costs we could not pass on to our customers, our costs could increase and our relationships with some of our customers could be adversely affected. In addition, if one or more of our third-party package delivery providers were to increase prices, and we were not able to find comparable alternatives or make adjustments within our delivery network, our profitability could be adversely affected.

Our business sells many products through distributors, which present risks that could negatively affect our operating results.

We sell many of our products, both within and outside of the U.S., through distributors. As a result, we are dependent on these distributors to sell our products and assist us in promoting and creating a demand for our products. Our distributors sometimes offer products from several different companies, and those distributors may carry our competitors' products and promote our competitors' products over our own. We have limited ability, if any, to cause our distributors to devote adequate resources to promoting, marketing, selling and supporting our products. We cannot assure that we will be successful in maintaining and strengthening our relationships with our distributors or establishing relationships with new distributors who have the ability to market, sell and support our products effectively. We may rely on one or more key distributors for a product or region, and the loss of one or more of these distributors could reduce our revenue. Distributors may face financial difficulties, including bankruptcy, which could impact our ability to collect our accounts receivable and negatively impact our financial results. In addition, violations of anti-corruption laws or similar laws by our distributors could have a material impact on our business, and any termination of a distributor relationship may result in increased competition in the applicable jurisdiction. Failing to manage the risks associated with our use of distributors may reduce sales, increase expenses and weaken our competitive position, which could have a negative impact on our operating results.

The development of new products entails substantial risk of failure due to the production of non-viable products, lack of properly identifying market potential, and competitors better serving the marketplace.

Our growth strategy includes significant investment in and expenditures for product development. To execute this strategy, we are continually developing new products for which we believe there should be significant market demand. We cannot assure that we will successfully develop commercially viable products, that the products will be developed on a timely basis to meet market demand or that the relevant market will be properly identified. Our competitors may also adapt more quickly, and deliver superior technologies, price and/or service to better fit our customers' requirements. If we expend substantial resources in developing an unsuccessful product, whether that lack of success is the result of our production of a non-viable product, a misidentified market, or a competitor's superior ability to meet our customers' requirements, operating results could be adversely affected.

The markets for our products are extremely competitive, and our competitors may be able to utilize existing resource advantages to our detriment.

The markets in which we compete are subject to rapid and substantial changes in technology and are characterized by extensive research and development and intense competition. Our competitors and potential competitors may have greater financial, technical, manufacturing, marketing, research and development and management resources than we do. These competitors might be able to use their resources, reputations and ability to leverage existing customer relationships to give them a competitive advantage over us. They might also succeed in developing products that are more reliable and effective than our products, are less costly than our products or provide alternatives to our products.

We are dependent on the agricultural marketplace, which is affected by factors beyond our control.

Our primary customers are in the agricultural and food production industries. Economic conditions affecting agricultural industries are cyclical and are dependent upon many factors outside of our control, including weather conditions, changes in consumption patterns or commodity prices. Any of these factors in the agricultural marketplace could affect our sales and overall financial performance.

Our quarterly operating results are subject to significant fluctuations.

We have experienced, and may experience in the future, significant fluctuations in our quarterly operating results. The mix of products sold and the acceptance of new products, in addition to other factors, could contribute to this quarterly variability. We operate with relatively little backlog and have few long-term customer contracts. Substantially all our product revenue in each quarter results from orders received in that quarter. In addition, our expense levels are based, in part, on our expectation of future revenue levels. A shortfall in expected revenue could, therefore, result in a disproportionate decrease in our net income.

Our success is highly dependent on our ability to obtain protection for the intellectual property utilized in our products.

Our success and ability to compete depends in part upon our ability to obtain protection in the U.S. and other countries for our products by establishing and maintaining intellectual property rights relating to or incorporated into our technology and products. Patent applications filed by us may not result in the issuance of patents or, if issued, may not be issued in a form that will be commercially advantageous to us. Even if issued, patents may be challenged, narrowed, invalidated or circumvented, which could limit our ability to stop competitors from marketing similar products or limit the length of time we may have patent protection for our products. We also cannot assure that our nondisclosure agreements, together with trade secrets and other common law rights, will provide meaningful protection for our trade secrets and other proprietary information. Moreover, the laws of some foreign jurisdictions may not protect intellectual property rights to the same extent as in the U.S., and many companies have encountered significant difficulties in protecting and defending such rights in foreign jurisdictions. If we encounter such difficulties or we are otherwise precluded from effectively protecting our intellectual property rights domestically or in foreign jurisdictions, we may incur substantial costs and our business, including our business prospects, could be substantially harmed.

From time to time, we have received notices alleging that our products infringe third-party proprietary rights. Whether the manufacture, sale or use of current products, or whether any products under development would, upon commercialization, infringe any patent claim will not be known with certainty unless and until a court interprets the patent claim in the context of litigation. When an infringement allegation is made against us, we may seek to invalidate the asserted patent claim and/or to allege non-infringement of the asserted patent claim. For us to invalidate a U.S. patent claim, we would need to rebut the presumption of validity afforded to issued patents in the U.S. with clear and convincing evidence of invalidity, which is a high burden of proof. The outcome of infringement litigation is subject to substantial uncertainties, and also the testimony of experts as to technical facts upon which experts may reasonably disagree. Our defense of an infringement litigation lawsuit could result in significant expense. Regardless of the outcome, infringement litigation could significantly disrupt our marketing, development and commercialization efforts, divert management's attention and consume our financial resources. In the event that we are found to infringe any valid claim in a patent held by a third party, we may, among other things, be required to:

- Pay damages, including up to treble damages and the other party's attorneys' fees, which may be substantial;
- Cease the development, manufacture, importation, use and sale of products that infringe the patent rights of others, through a court-imposed injunction;
- Expend significant resources to redesign our technology so that it does not infringe others' patent rights, or develop or acquire non-infringing intellectual property, which may not be possible;
- Discontinue manufacturing or other processes incorporating infringing technology; and/or
- Obtain licenses to the infringed intellectual property, which may not be available to us on acceptable terms, or at all.

Any development or acquisition of non-infringing products, technology or licenses could require the expenditure of substantial time and other resources and could have a material adverse effect on our business and financial results. If we are required to, but cannot, obtain a license to valid patent rights held by a third party, we would likely be prevented from commercializing the relevant product, or from further manufacture, sale or use of the relevant product.

We are subject to substantial governmental regulation.

A portion of our products and facilities are regulated by various domestic and foreign government agencies including, but not limited to, the U.S. Department of Agriculture, the U.S. Food and Drug Administration and the Environmental Protection Agency. A significant portion of our revenue is derived from products used to monitor and detect the presence of residues that are regulated by various government agencies. Furthermore, our growth may be adversely affected by the implementation of new regulations. The costs of compliance or failure to comply with any obligations related to these laws or regulations could adversely impact our business.

We are dependent on key employees.

Our success depends, in large part, on members of our management team. Our loss of any of these, or other key employees could have a material adverse effect on us. We have not executed long-term employment agreements with any of these employees and do not expect to do so in the foreseeable future. Our success depends, significantly, on our ability to continue to attract and retain such personnel. We cannot assure that we will be able to retain our existing personnel or attract additional qualified persons when required and on acceptable terms.

Our business may be subject to product or services liability claims.

The manufacturing and distribution of our products or performance of our services involves an inherent risk of liability claims being asserted against us. Regardless of whether we are ultimately determined to be liable or our products are determined to be defective, we might incur significant legal expenses not covered by insurance. In addition, product liability litigation could damage our reputation and impair our ability to market our products, regardless of the outcome. Litigation could also impair our ability to retain product liability insurance or make our insurance more expensive.

Although we currently maintain liability insurance, we cannot assure that we will be able to continue to obtain such insurance on acceptable terms, or that such insurance will provide adequate coverage against all potential claims. If we are subject to an uninsured or inadequately insured product or services liability claim, our business, financial condition and results of operations could be adversely affected.

Market prices for securities of technology companies are highly volatile.

The market prices for securities of technology companies have been volatile in the past and could continue to be volatile in the future. Fluctuations in our financial performance from period to period could have a significant impact on the market price of our common shares.

Our international operations are subject to different product standards as well as other operational risks.

In fiscal 2020, sales to customers outside of the U.S. accounted for 39.4% of our total revenue. We expect that our international business will continue to account for a significant portion of our total sales. Foreign regulatory bodies may establish product standards different from those in the U.S. and with which our current products do not comply. Our potential inability to design products that comply with foreign standards could have a material adverse effect on our future growth. Other risks related to sales to customers outside of the U.S. include possible disruptions in transportation, difficulties in building and managing foreign distribution, fluctuation in the value of foreign currencies, changes in import duties and quotas and unexpected economic and political changes in foreign markets. These factors could negatively impact our competitiveness in these markets or otherwise adversely impact our business results or financial condition. Moreover, discriminatory or conflicting fiscal or trade policies in different countries, including potential changes to tariffs and existing trade policies and agreements, could adversely affect our results.

Changing political conditions could adversely impact our business and financial results.

Changes in the political conditions in markets in which we manufacture, sell or distribute our products may be difficult to predict and may adversely affect our business and financial results. For example, the U.K.'s decision to leave the European Union has created uncertainty regarding, among other things, the U.K.'s future legal and economic framework and how the U.K. will interact with other countries, including with respect to the free movement of goods, services, capital and people. In addition, results of elections, referendums or other political processes in certain markets in which our products are manufactured, sold or distributed could create uncertainty regarding how existing governmental policies, laws and regulations may change, including with respect to sanctions, taxes, the movement of goods, services, capital and people between countries and other matters. The potential implications of such uncertainty, which include, among others, exchange rate fluctuations, trade barriers and market contraction, could adversely affect the Company's business and financial results.

Tax legislation could materially adversely affect our financial results and tax liabilities.

We are subject to the tax laws and regulations of the U.S., including state and local governments, as well as foreign jurisdictions. Legislation may be enacted that could materially adversely affect our financial results There can be no assurance that our effective tax rate will not be adversely affected by legislation.

Our tax expense and liabilities may also be affected by other factors, such as changes in our business operations, acquisitions, investments, entry into new businesses and geographies, intercompany transactions, the relative amount of our foreign earnings, losses incurred in jurisdictions for which we are not able to realize related tax benefits, changes in our stock price, and changes in our deferred tax assets and liabilities and their valuation. In addition, tax laws and regulations are extremely complex and subject to varying interpretations. For example, the legislation known as the U.S. Tax Cuts and Jobs Act of 2017 (the "U.S. Tax Act") requires complex computations to be performed that were not previously required by U.S. tax law, significant judgments to be made in interpretation of the provision of the U.S. Tax Act, significant estimates in calculations, and the preparation and analysis of information not previously relevant or regularly produced. The U.S. Treasury Department, the IRS, and other standard-setting bodies will continue to interpret or issue guidance on how provisions of the U.S. Tax Act will be applied or otherwise administered. As future guidance is issued, we may make adjustments to amounts that we have previously recorded that may materially impact our financial statements in the period in which the adjustments are made.

Although we believe that our historical tax positions are sound and consistent with applicable laws, regulations and existing precedent, there can be no assurance that our tax positions will not be challenged by relevant tax authorities or that we would be successful in any such challenge. Additionally, we operate in multiple income tax jurisdictions and must determine the appropriate allocation of income to each of these jurisdictions based on current interpretations of complex income tax regulations. Income tax audits associated with the allocation of income and other complex issues may result in significant income tax adjustments that could negatively impact our future operating results.

ITEM 1B. UNRESOLVED STAFF COMMENTS – NONE

ITEM 2. PROPERTIES

Principal Manufacturing, Distribution and Administrative locations

Location	Square Feet	Operations	Ownership
Lansing, Michigan	300,000	Corporate, Food Safety, Animal Safety	Owned
Lexington, Kentucky	210,000	Animal Safety	Owned
Kenansville, North Carolina	33,500	Animal Safety	Leased, expires 3/2021
St Joseph, Michigan	7,000	Animal Safety	Leased, expires 5/2021
Randolph, Wisconsin	137,000	Animal Safety	Owned
Pleasantville, Iowa	59,000	Animal Safety	Leased, expires 12/2020
Lincoln, Nebraska	41,000	Animal Safety	Owned
Memphis, Tennessee	66,100	Animal Safety	Owned
Turlock, California	29,500	Animal Safety	Leased, expires 9/2022
Edmonton, Alberta, Canada	4,800	Animal Safety	Owned
Ayr, Scotland, United Kingdom	74,000	Food Safety	Owned
Heywood, England, United Kingdom	26,800	Food Safety	Owned
Rochdale, England, United Kingdom	60,000	Food Safety	Owned
Liverpool, England, United Kingdom	4,000	Food Safety	Leased, expires 12/2025
Milan, Italy	1,000	Food Safety	Leased, expires 12/2020
Indaiatuba, Brazil	6,800	Food Safety	Leased, expires 5/2021
Pindamonhangaba, Brazil	76,000	Food Safety	Owned
Naucalpan, Mexico	27,000	Food Safety	Leased, expires 10/2021
Buenos Aires, Argentina	2,200	Food Safety	Leased, expires 8/2020
Ciudad de la Costa, Uruguay	900	Food Safety	Leased, expires 10/2020
Santiago, Chile	2,700	Food Safety	Leased, expires 3/2022
Shanghai, China	7,900	Food Safety	Leased, expires 10/2021
Kochi, India	5,500	Food Safety	Leased, expires 4/2021
Gatton, Australia	4,600	Animal Safety	Leased, expires 1/2023

Our corporate headquarters are located in Lansing, Michigan, with administrative, sales, manufacturing and warehousing in other locations domestically and globally. These properties are in good condition, well-maintained, and generally suitable and adequate to support our business. For those leases expiring within the next 12 months, we believe that we will be able to negotiate agreements to extend such leases on similar terms.

ITEM 3. LEGAL PROCEEDINGS

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

ITEM 4. MINE SAFETY DISCLOSURES — NOT APPLICABLE

PART II

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

Market Information

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

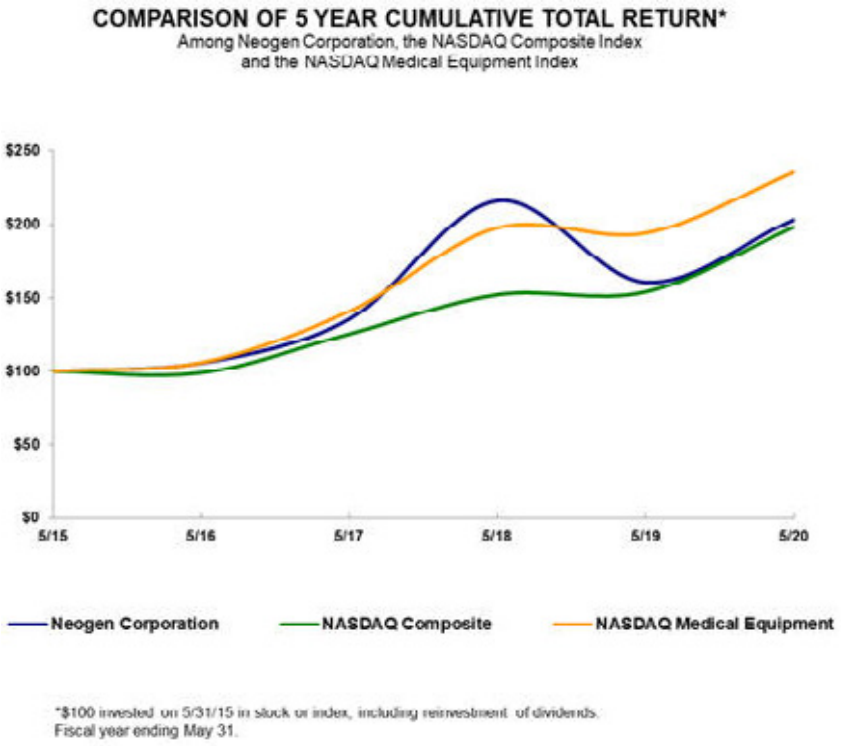
Holders

As of June 30, 2020, there were approximately 245 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.

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 5/31/2015 to 5/31/2020.



	5/15	5/16	5/17	5/18	5/19	5/20
Neogen Corporation	**100.00**	**105.63**	**135.41**	**215.97**	**160.75**	**203.17**
NASDAQ Composite	**100.00**	**98.82**	**125.26**	**152.00**	**153.87**	**197.98**
NASDAQ Medical Equipment	**100.00**	**105.80**	**140.72**	**197.84**	**194.22**	**235.57**

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

ITEM 6. SELECTED FINANCIAL DATA

The following tables set forth selected consolidated financial data of Neogen for the year ended May 31, 2020, and each of the four preceding fiscal years. The selected consolidated financial data presented below have been derived from our consolidated financial statements. This financial data should be read in conjunction with the consolidated financial statements, related notes and other financial information appearing elsewhere in this Form 10-K.

	Year Ended May 31				
	2020	2019	2018	2017	2016
(in thousands, except per share data)					
Income Statement Data:					
Food Safety Revenues	$212,691	$213,474	$194,477	$170,034	$145,057
Animal Safety Revenues	205,479	200,712	203,453	188,243	172,172
Total Revenues	418,170	414,186	397,930	358,277	317,229
Total Cost of Revenues	221,891	222,266	211,658	189,353	167,898
Gross Margin	196,279	191,920	186,272	168,924	149,331
Sales and Marketing	69,675	70,230	66,929	59,380	53,866
General and Administrative	44,331	40,791	38,294	34,214	29,189
Research and Development	14,750	12,805	10,855	10,385	9,890
Operating Income	67,523	68,094	70,194	64,945	56,386
Other Income (Expense)	4,782	4,865	3,271	1,728	(873)
Income Before Income Taxes	72,305	72,959	73,465	66,673	55,513
Provision for Income Taxes	12,830	12,783	10,250	22,700	18,975
Net Income	59,475	60,176	63,215	43,973	36,538
Net (Income) Loss Attributable to Non-controlling Interest	—	—	(70)	(180)	26
Net Income Attributable to Neogen	$ 59,475	$ 60,176	$ 63,145	$ 43,793	$ 36,564
Net Income per Share (basic) (1)	$ 1.13	$ 1.16	$ 1.23	$ 0.87	$ 0.73
Net Income per Share (diluted) (1)	$ 1.13	$ 1.15	$ 1.21	$ 0.86	$ 0.72
Weighted Average Shares Outstanding (diluted) (1)	52,860	52,425	52,149	51,165	50,500

	Year Ended May 31				
	2020	2019	2018	2017	2016
Balance Sheet Data:					
Cash and Cash Equivalents and Marketable Securities	$343,673	$267,524	$210,810	$143,635	$107,796
Working Capital (2)	488,917	411,278	337,101	256,959	219,628
Total Assets	797,182	695,740	618,009	528,409	449,940
Long-Term Debt	—	—	—	—	—
Total Equity	725,177	637,899	560,175	471,757	404,161

(1) On December 29, 2017, the Company effected a 4-for-3 stock split whereby shareholders of record on December 18, 2017 received a dividend of one additional share of stock for each three shares held. All share and per share amounts in this Form 10-K have been adjusted to reflect the stock split as if it had taken place at the beginning of the period presented.

(2) Defined as current assets less current liabilities.

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

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with the consolidated financial statements and related notes appearing elsewhere in this Annual Report on Form 10-K.

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. Though the impact of the COVID-19 pandemic to our business and operating results presents additional uncertainty, we continue to use the best information available to inform our critical accounting estimates. Actual results may differ from these estimates under different assumptions or conditions.

The following critical accounting policy reflects management's more significant judgments and estimates used in the preparation of 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. The determination of income subject to income tax in each tax paying jurisdiction requires us to apply transfer pricing guidelines for certain intercompany transactions.

Our wholly-owned foreign subsidiaries are comprised of Neogen Europe, Lab M Ltd, Quat-Chem Ltd, Abtek (Biologicals) Ltd, Neogen Italia S.r.l., Neogen do Brasil, Rogama Industria e Comercio Ltda, Neogen Latinoamérica, Productos Quimicos Magiar S.A., Neogen Uruguay, Neogen Chile SpA, 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. It is not practicable to determine the income tax liability that would be payable if such earnings were not reinvested indefinitely.

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.

RESULTS OF OPERATIONS

Executive Overview

- Consolidated revenues were $418.2 million in fiscal 2020, an increase of 1.0% compared to $414.2 million in fiscal 2019. Organic sales overall increased 0.2% compared to the prior year.
- Food Safety segment sales were $212.7 million in fiscal 2020 compared to $213.5 million in fiscal 2019, a decrease of $800,000, or 0.4%. Organic sales decreased 1.3%, while the Clarus Labs (August 2018) acquisition, the purchase of four former distributors and a small manufacturer (Abtek) completed during the year, contributed $2.0 million in revenues.
- Animal Safety segment sales were $205.5 million in fiscal 2020, an increase of 2.4% compared to $200.7 million in fiscal 2019. Organic sales rose 1.9%, with the acquisitions of Livestock Genetic Services (September 2018), Delta Genomics (January 2019) and Cell BioSciences (March 2020) contributing the remainder of the growth.
- International sales were 39.4% of total sales in fiscal 2020 compared to 40.1% of total sales in fiscal 2019.
- Our effective tax rate was 17.7% in fiscal 2020 compared to an effective tax rate of 17.5% in fiscal 2019.
- Net income was $59.5 million, or $1.13 per diluted share, a decrease of 1% compared to $60.2 million, or $1.15 per share, in the prior year.
- Cash generated from operating activities in fiscal 2020 was $85.9 million, compared to $63.8 million in fiscal 2019.

Neogen's international revenues were $164.7 million in fiscal 2020, compared to $165.9 million in fiscal 2019. Currency translation had a negative impact during the year. In a neutral currency environment, revenues would have been approximately $6.0 million higher on a comparative basis in fiscal 2020, as the U.S. dollar (USD) strengthened against all the currencies in the countries in which we conduct business. As financial markets reacted to the global impact of the COVID-19 pandemic, currency translations negatively impacted comparative revenues by $3.5 million in the fourth quarter of fiscal 2020. This was primarily due to devaluation of the Brazilian real and the Mexican peso, which were 25% and 18% lower on average, respectively, compared to the fourth quarter of fiscal 2019.

We continue to focus on increasing our presence and market share throughout the world, while also integrating recent international acquisitions into our overall geographic and product portfolio. Sales results for fiscal 2020 compared to the prior year are as follows for each of our international locations:

	Revenue % Increase USD	Revenue % Increase Local Currency
Neogen Europe (including Lab M, Quat-Chem & Abtek)	5%	8%
Neogen do Brasil (including Rogama)	(10)%	0%
Neogen Latinoamerica	6%	11%
Neogen China	22%	26%
Neogen India	3%	5%
Neogen Australasia	18%	26%
Neogen Canada	70%	72%

The revenue increase in U.S. dollars at Neogen Europe was led by a 14% increase in sales of disinfectant and veterinary products, primarily due to COVID-19 related sales of hand sanitizer and disinfectant in the U.K. Sales of genomics services rose 7% in fiscal 2020, on strength to the bovine market. Sales of culture media products increased 5% for the year. Partially offsetting this growth, were lower sales of deoxynivalenol (DON) test kits into France and Germany, due to an outbreak in fiscal 2019, which did not recur in the current year.

Revenues in Brazil declined 10% in USD in fiscal 2020, in large part due to the devaluation of the Brazilian real relative to the U.S. dollar during the year. Sales of our forensic drug test kits, used to test for the presence of prohibited drugs in commercial truck drivers in that country, declined 86%, as a large commercial laboratory switched to an alternative testing method in the first quarter of the year. Genomics revenues in Brazil declined 26% during the year, primarily due to a project testing cattle for the Brazilian government in the prior fiscal year which did not recur in fiscal 2020,

as well as delays in receiving samples in the fourth quarter due to COVID-19. Partially offsetting that decline was strong growth in sales of natural toxins test kits, as we continued to gain significant business from customers testing for the presence of aflatoxin in corn and DON in grains.

Neogen Latinoamerica grew revenues by 6% in USD, with strong growth in sales of diagnostic test kits, which offset lower sales of cleaners, disinfectants and rodenticides in Mexico and Central America due to weakness in the distribution channels in those markets. Growth in China was the result of strong sales of cleaners and disinfectants, including Neogen Viroxide Super, into the porcine market, due to demand resulting from the Asian swine flu and COVID-19 outbreak in that country. Revenue growth in India was 3% for the year but decreased 16% during the fourth quarter compared to the prior year, as the country's economic activity was greatly reduced in that period due to COVID-19. Neogen Australasia's growth was led by a 21% gain in genomics revenue to the sheep market and growth in traditional animal safety products for the year, while strong genomics sales in beef and poultry markets in Canada drove their 70% revenue increase, albeit off a small base.

Service revenue, which consists primarily of genomics services to animal protein and companion animal markets, was $82.6 million in fiscal 2020, an increase of 11% over prior fiscal year sales of $74.7 million. The growth was led by increases in sample volumes from the global commercial beef, sheep and companion animal markets, while porcine and poultry sales were fairly flat.

REVENUES

	Year Ended				
(dollars in thousands)	**May 31, 2020**	**Increase/ (Decrease)**	**May 31, 2019**	**Increase/ (Decrease)**	**May 31, 2018**
Food Safety:					
Natural Toxins, Allergens & Drug Residues	$ 76,207	(3)%	$ 78,373	7%	$ 72,962
Bacterial & General Sanitation	41,780	(0)%	41,966	10%	38,156
Culture Media & Other	47,847	(4)%	49,857	13%	44,271
Rodenticides, Insecticides & Disinfectants	28,890	13%	25,584	7%	23,821
Genomics Services	17,967	2%	17,694	16%	15,267
	212,691	(0)%	213,474	10%	194,477
Animal Safety:					
Life Sciences	6,322	(20)%	7,858	(25)%	10,411
Veterinary Instruments & Disposables	42,941	(4)%	44,582	(7)%	47,749
Animal Care & Other	28,389	(5)%	29,941	(3)%	30,930
Rodenticides, Insecticides & Disinfectants	68,815	4%	66,389	(2)%	67,646
Genomics Services	59,012	14%	51,942	11%	46,717
	205,479	2%	200,712	(1)%	203,453
Total Revenue	$ 418,170	1%	$ 414,186	4%	$ 397,930

Year Ended May 31, 2020 Compared to Year Ended May 31, 2019

Food Safety:

The COVID-19 pandemic in the second half of fiscal 2020 resulted in difficult operating conditions in many of our key market segments. Shelter in place orders across the U.S. and in a number of our international markets, the closure or reduced output of businesses due to quarantine, disruption in the supply chain resulting from reduction in end-market demand, and the inability of some markets to react quickly to these changes, each adversely impacted our revenues.

Natural Toxins, Allergens & Drug Residues – Sales in this category were 3% lower in fiscal 2020 compared to the prior year, driven by a 30% decline in sales of drug residues test kits, due to lower demand from a large distributor in Europe. In January 2020, we ended our exclusive

relationship with this distributor and have begun marketing these products directly into the European market. Partially offsetting the decrease in drug residue testing, the natural toxins and allergens product lines each increased 4% for the year. The natural toxin increase was due to continued new business earned in Brazil for aflatoxin and DON test kits, partially offset by lower sales of DON test kits in the U.S. and France, the result of mild outbreaks in the prior year which did not recur in fiscal 2020. The allergen test kit increase was primarily the result of strong gliadin, milk and coconut allergen test kit sales in the U.S. market, although fourth quarter sales declined 7% due to lower business with customers supplying restaurants and other food service organizations, which were adversely impacted by COVID-19.

Bacterial & General Sanitation – Sales in this category were essentially flat in fiscal 2020 compared to the prior year. Sales of test kits to detect pathogens decreased 2%, as lower sales of ANSR equipment were only partially offset by increases from our *Listeria* Right Now test kit, which grew 24% in fiscal 2020. Sales of our AccuPoint sanitation monitoring product line increased 6%, on gains in both readers and samplers. Sales of products to detect spoilage organisms in foods decreased 7% in fiscal 2020 on reduced sales of readers and consumable vials during the year, resulting from lower market demand and customer losses.

Culture Media & Other – Sales in this category decreased 4% in fiscal 2020 compared to fiscal 2019. This category includes forensic drug test kits sold within Brazil, which declined significantly as a large commercial lab customer in that country moved to an alternative technology which provided higher throughput. Culture media revenues declined 5%, due to lower end market demand from several large customers in the U.S. Higher shipping revenues, which rose 12% for the year, and lower rebates offered to certain customers, both of which are reported in this category, partially offset the lower forensic and culture media revenues.

Rodenticides, Insecticides & Disinfectants – Revenues of products in this category sold through our Food Safety operations increased 13% in fiscal 2020 compared to fiscal 2019. This category was led by increases in sales of cleaners and disinfectants to customers in Europe, the Middle East and China, partially offset by a decrease in sales of rodenticides in Central America due to lower demand from a large distributor, and reduced demand of cleaners and disinfectants in India, due to a large order in 2019 which did not recur in fiscal 2020.

Genomics Services – Sales of genomics services sold through our Food Safety operations increased 2% in fiscal 2020 compared to the prior year, primarily due to higher sales in the European bovine and equine markets. Partially offsetting this increase were lower revenues from our genomics operation in Brazil due to a research project with the Brazilian government from 2019 which did not recur in fiscal 2020.

Animal Safety:

A significant proportion of the Animal Safety products are marketed and sold through our veterinary distributor network; this channel has been soft in both fiscal years 2019 and 2020, as difficult market conditions resulting from increased tariffs and political uncertainties in our agricultural and animal protein markets continued. The COVID-19 pandemic in the second half of fiscal 2020 has exacerbated these market conditions; further, the market uncertainty resulting from COVID-19 has caused our larger distributor partners to implement working capital improvement programs by lowering inventory levels which resulted in lower sales of many products in our animal health portfolio. Partially offsetting this weakness in the fourth quarter were higher sales of several of our cleaning and disinfecting products due to demand caused by the COVID-19 pandemic.

Life Sciences – Sales in this category decreased 20% in fiscal 2020 compared to the same period in the prior year, the result of lower forensic drug test kit sales to a large commercial lab in the U.S. serving the Brazilian market, a reduction in sales of products to the U.S. horse racing industry in the U.S. due to a decline in domestic racing activity, and the consolidation of several state laboratories.

Veterinary Instruments & Disposables – Revenues in this category decreased 4% in fiscal 2020 compared to fiscal 2019. Veterinary instruments sales were down 7% for the year, primarily the result of a 20% decline in needles and 3% decline in syringes, due to lower demand from our largest distributors. Partially offsetting these decreases, protective wear and consumables increased 24% for the year, on the strength of a $956,000 increase in gloves in the fourth quarter of fiscal 2020, the result of demand caused by the COVID-19 pandemic.

Animal Care & Other – Sales of these products decreased 5% in fiscal 2020 compared to fiscal 2019. Antibiotics and injectable vitamin products were down 20% and 15%, respectively, due primarily to inventory destocking at distributors. Sales of our biologics product line, marketed primarily into the equine market, declined 17%, and our equine supplements were also down 20%, due to lower demand from end customers in this market. Sales of wound care products rose 9% to partially offset these losses.

Rodenticides, Insecticides & Disinfectants – Sales in this category increased 4% in fiscal 2020, compared to the prior year. The increase was due primarily to a $2.6 million increase in sales of cleaners and disinfectants for the year, driven in large part by growth in hand sanitizers, disinfectants, and disinfecting wipes in the fourth quarter resulting from the COVID-19 pandemic. Revenues for water disinfection in animal protein production environments rose 8% over fiscal 2019. Rodenticide sales increased 1% over the prior year, as strong growth in the retail market was almost entirely offset by lower sales to agricultural markets in the northwest U.S., due to lower rodent pressure. Insecticide revenues declined 2% for the year.

Genomics Services – Sales in this category increased 14% in fiscal 2020, aided by the acquisition of Livestock Genetics (September 2018) and Delta Genomics (January 2019); organic growth in this category was 12%. Strong growth in the companion animal and commercial beef cattle markets was partially offset by revenue decreases in the U.S. commercial dairy market due to weak economic conditions in that market, resulting from a movement away from dairy milk towards alternative products.

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 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 drug 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:

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 drug 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 acquisition 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.

COST OF REVENUES

(dollars in thousands)	2020	Increase	2019	Increase	2018
Cost of Revenues	$221,891	0%	$222,266	5%	$211,658

Cost of revenues was essentially flat in fiscal 2020 compared to fiscal 2019 and rose 5% in fiscal 2019 compared to fiscal 2018. This compares with revenue increases of 1% in fiscal 2020 and 4% in fiscal 2019. Expressed as a percentage of sales, cost of revenues was 53.1%, 53.7% and 53.2% in fiscal years 2020, 2019 and 2018, respectively. Gross margins were 46.9%, 46.3%, and 46.8% for fiscal years 2020, 2019, and 2018, respectively.

Fiscal 2020 – Our overall gross margin improved 60 basis points in fiscal 2020, primarily from improved gross margin in the Animal Safety segment and improved efficiencies, resulting from a focus on manufacturing cost reductions. These efforts resulted in a slight decrease in cost of revenues compared to the prior fiscal year.

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.

Food Safety Gross Margins:

Food Safety gross margins were 51.4%, 51.8% and 52.4% in fiscal years 2020, 2019 and 2018, respectively.

Fiscal 2020 –Food Safety margins decreased 40 basis points in fiscal 2020, primarily due to lower sales of higher margin forensic test kits in Brazil, and the continued strength of the U.S. dollar against currencies in the countries in which we operate; our international operations pay for their inventory primarily in U.S. dollars, and the weakness in local currencies adversely impacted gross margins.

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.

Animal Safety Gross Margins:

Animal Safety gross margins were 42.3%, 40.6% and 41.4% in fiscal years 2020, 2019 and 2018, respectively.

Fiscal 2020 – Animal Safety gross margins increased by 170 basis points, driven by increased sales of higher margin disinfectant products, particularly in the fourth quarter of the year as a result of the COVID-19 pandemic, which caused heavy demand for our sanitizing products. In addition, a mix shift towards genomics services for the companion animal markets, which have higher gross margins within the genomics business, contributed to the improvement.

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 Food 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.

OPERATING EXPENSES

(dollars in thousands)	2020	Increase	2019	Increase	2018
Sales and Marketing	$ 69,675	-1%	$ 70,230	5%	$ 66,929
General and Administrative	44,331	9%	40,791	7%	38,294
Research and Development	14,750	15%	12,805	18%	10,855
Total Operating Expense	$128,756	4%	$123,826	7%	$116,078

Overall operating expenses increased by 4% in fiscal 2020 and 7% in fiscal 2019, each compared to the prior year. These increases compare to revenue increases of 1% and 4%, respectively, for each comparative period.

Sales and Marketing:

Sales and marketing expenses decreased by 1% in fiscal 2020 compared to fiscal 2019 and rose 5% in fiscal 2019 compared to the prior year. As a percentage of sales, sales and marketing expense was 16.7%, 17.0% and 16.8% in fiscal years 2020, 2019 and 2018, respectively.

Fiscal 2020 – The $550,000 decline in sales and marketing expenses in fiscal 2020 was driven by a $1.3 million, or 7.4%, decline in spending in this category in the fourth quarter of the year, caused by a reduction in business travel, meals and entertainment, trade shows, and related marketing expenses, as the COVID-19 global pandemic resulted in strict travel restrictions and reductions in face to face sales activities in many of our markets during the quarter. Partially offsetting these declines were higher compensation and related fringe benefits, the result of increased headcount, increased shipping expenses, and higher regulatory expense due to product registration efforts in our international markets.

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.

General and Administrative:

General and administrative expenses rose 9% in fiscal 2020 compared to fiscal 2019 and by 7% in fiscal 2019 compared to fiscal 2018. As a percentage of sales, general and administrative expense was 10.6%, 9.8% and 9.6% in fiscal years 2020, 2019 and 2018, respectively.

Fiscal 2020 – Higher stock-based compensation costs and a significant uptick in legal fees, driven in part by the number of acquisitions completed during the year, resulted in the overall 9% expense increase. In addition, the company continued to invest in information technology infrastructure, network capabilities and e-commerce initiatives. This resulted in higher depreciation on IT-related hardware and increased license fees on software investments. These increases were somewhat offset by a reduction in outside consulting. General and administrative expenses at five new company locations, the result of acquisitions in the second half of fiscal 2020, totaled $520,000 for the year.

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.

Research and Development:

Research and development expenses increased 15% in fiscal 2020 and 18% in fiscal 2019, each compared to the prior year. As a percentage of revenue, these expenses were 3.5% in fiscal year 2020, 3.1% in fiscal year 2019 and 2.7% in fiscal year 2018; we expect to spend approximately 3% of total revenue on research and development annually.

Fiscal 2020 – The 15% increase in research and development expenses in fiscal 2020 was primarily the result of continued spending with development partners for two new readers, currently anticipated to be launched in the first half of fiscal 2021. Increased compensation expense, resulting from investments in people as we heighten the development capabilities of the group, higher depreciation expense from continued investment in analytical equipment, and an increase in contracted services also contributed to the expense growth.

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.

OPERATING INCOME

(dollars in thousands)	2020	Increase	2019	Increase	2018
Operating Income	$67,523	-1%	$68,094	-3%	$70,194

Our operating income decreased by 1% in fiscal 2020 compared to fiscal 2019, and by 3% in fiscal 2019 compared to fiscal 2018. Expressed as a percentage of revenues, operating income was 16.1%, 16.4% and 17.6% in fiscal years 2020, 2019 and 2018, respectively.

Gross margins rose by $4.4 million in fiscal 2020; the increase was more than offset by an overall increase of $4.9 million, or 4.0%, in operating expenses, resulting in a 1% decrease in operating income compared to fiscal 2019.

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.

OTHER INCOME (EXPENSE)

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

(dollars in thousands)	2020	2019	2018
Interest income (net of expense)	$ 5,992	$ 4,683	$2,043
Foreign currency transactions	(1,178)	(1,279)	274
Royalty income	1	150	147
Licenses and settlements	(38)	672	360
Quat-Chem contingent consideration	—	422	255
Deoxi contingent consideration	—	(10)	(42)
Other	5	227	234
Total Other Income	$ 4,782	$ 4,865	$3,271

The increase in interest income in fiscal years 2020 and 2019, each compared to the prior year, is the result of higher cash balances and rising interest rates during the two year period. During the second half of the 2020 fiscal year, and particularly in response to the COVID-19 pandemic, yields on fixed income securities declined significantly, corresponding to a similar decline in the ten year U.S. Treasury bill rate. The loss from foreign currency translations in fiscal 2020 and 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 each comparative year.

In fiscal 2020, we recognized $600,000 of expense for an expected settlement of a penalty payable to the U.S. government due to a violation of a sanctions program. This was partially offset by a $483,000 gain resulting from a settlement with the Brazilian government related to sales taxes charged over several years, and proceeds received for a property loss settlement. In fiscal 2019 and 2018, gains were recognized on insurance proceeds received for property loss settlements. 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)	2020	Increase	2019	Increase	2018
Provision for Income Taxes	$12,830	0%	$12,783	25%	$10,250

Income tax expense for fiscal 2020 was $12.8 million, an effective tax rate of 17.7%, compared to income tax expense of $12.8 million in 2019, an effective tax rate of 17.5%. For fiscal 2018, income tax expense of $10.3 million represented an effective tax rate of 14.0%.

The U.S. Tax Act reduced the statutory income tax rate from 35% to 21% in December 2017. During both fiscal 2020 and 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%.

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)	2020	Increase	2019	Increase	2018
Net Income Attributable to Neogen	$59,475	-1%	$60,176	-5%	$63,145
Net Income Per Share-Basic	$ 1.13		$ 1.16		$ 1.23
Net Income Per Share-Diluted	$ 1.13		$ 1.15		$ 1.21

Net income decreased $701,000 in fiscal 2020 compared to fiscal 2019, primarily due to the $654,000 decrease in in pre-tax income.

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.

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, 2020, we had $66.3 million in cash and cash equivalents, $277.4 million in marketable securities, and working capital of $488.9 million. For the year ended May 31, 2020, cash generated from operating activities was $85.9 million, compared to $63.8 million generated in fiscal 2019; proceeds from stock option exercises provided an additional $29.4 million of cash. For the same period, additions to property, equipment and other non-current assets were $24.1 million and business acquisitions used cash of $13.2 million. We have a financing agreement with a bank providing for an unsecured revolving line of credit of $15.0 million, which expires on September 30, 2021. There were no advances against this line of credit during fiscal years 2020, 2019 and 2018, and no balance outstanding at May 31, 2020 and 2019.

Net accounts receivable at May 31, 2020 were $84.7 million, compared to $82.6 million at May 31, 2019; the increase is primarily due to the increase in the days sales outstanding (DSO), a measurement of the time it takes to collect receivables, which was 68 days at May 31, 2020 compared to 61 days at May 31, 2019. We have been carefully monitoring our customer receivables as the COVID-19 pandemic has spread across our global markets; to date, although there has been some slowdown in collections, we have not experienced an appreciable increase in bad debt write offs. We did provide an additional $100,000 in our allowance for bad debts to account for potential write offs related to COVID-19, based in part on the increase in DSO, and will continue to actively manage our customer accounts and adjust the allowance account as circumstances change.

Inventory balances were $95.1 million at May 31, 2020, an increase of $9.1 million, or 11%, compared to $86.0 million at May 31, 2019. During both fiscal 2019 and fiscal 2020, we have 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 is now official, there is a transition period which ends on December 31, 2020, and we will continue to monitor and adjust our inventory levels as necessary. In 2020, we increased our inventory levels by $4.3 million in the U.S., in part to ensure that we have adequate supplies of critical raw and finished products in the event our supply chain is adversely impacted by COVID-19. We have also increased inventory levels at other international locations by approximately $1.3 million due to acquisitions. Notwithstanding these increases, all operations participate in programs to improve inventory turns, while ensuring adequate safety stock 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, 2020, we have the following contractual obligations due by period:

(dollars in thousands)	Total	Less than 1 year	1-3 years	3-5 years	More than 5 years
Long-Term Debt	$ —	$ —	$ —	$ —	$ —
Operating Leases	2,094	1,080	973	41	—
Unconditional Purchase Obligations (1)	55,180	48,681	6,499	—	—
	$57,283	$49,763	$ 7,478	$ 42	$ —

(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.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISKS

We have interest rate and foreign exchange rate risk exposure but no long-term fixed rate investments or borrowings. Our primary interest rate risk is due to potential fluctuations of interest rates for short-term investments.

Foreign exchange risk exposure arises because we market and sell our products throughout the world. Revenues in certain foreign countries as well as certain expenses related to those revenues are transacted in currencies other than the U.S. dollar. Our operating results are exposed to changes in exchange rates between the U.S. dollar and the British pound sterling, the euro, the Mexican peso, the Brazilian real, the Chinese yuan, the Australian dollar and to a lesser extent, the Indian rupee, the Canadian dollar, the Argentine peso, the Uruguayan peso and the Chilean peso; there is also exposure to a change in exchange rate between the British pound sterling and the euro. When the U.S. dollar weakens against foreign currencies, the dollar value of revenues denominated in foreign currencies increases. When the U.S. dollar strengthens, the opposite situation occurs. Additionally, previously invoiced amounts can be positively or negatively affected by changes in exchange rates in the course of collection.

Neogen has assets, liabilities and operations outside of the U.S., located in Scotland, England, Italy, Brazil, Mexico, Argentina, Uruguay, Chile, China, India, Canada and Australia where the functional currency is the British pound sterling, Brazilian real, Mexican peso, Argentine peso, Uruguayan peso, Chilean peso, Chinese yuan, Indian rupee, Canadian dollar and Australian dollar, respectively, and also transacts business throughout Europe in the euro. Our investments in foreign subsidiaries are considered to be long-term. As discussed in ITEM 1A. RISK FACTORS, our financial condition and results of operations could be adversely affected by currency fluctuations.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTAL DATA

The response to this item is submitted in a separate section of this report starting on page F-1.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE—NONE

ITEM 9A. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

An evaluation was performed under the supervision and with the participation of our management, including the Chief Executive Officer and Chief Financial Officer, of the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rule 13a-15 (e) under the Securities Exchange Act of 1934) as of May 31, 2020. Based on and as of the time of such evaluation, our management, including the Chief Executive Officer and Chief Financial Officer, concluded that our disclosure controls and procedures were effective as of the end of the period covered by this report to ensure that information required to be disclosed in the reports that are filed or submitted under the Securities and Exchange Act of 1934 is appropriately recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure the information required to be disclosed in the reports that are filed or submitted under the Securities Exchange Act of 1934 is accumulated and communicated to management, including the Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure.

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, 2020, 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, 2020. The effectiveness of internal control over financial reporting as of May 31, 2020 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, 2020 that have materially affected, or are reasonably likely to materially affect, internal control over financial reporting.

Report of Independent Registered Public Accounting Firm

Stockholders and Board of Directors
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, 2020, 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, 2020, 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, 2020 and 2019, the related consolidated statements of income, comprehensive income, stockholders' equity, and cash flows for each of the three years in the period ended May 31, 2020, and the related notes and our report dated July 30, 2020 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.

/s/ BDO USA, LLP

Grand Rapids, Michigan
July 30, 2020

ITEM 9B. OTHER INFORMATION – NONE

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Information regarding the Company and certain corporate governance matters appearing under the captions "Election of Directors," "Audit Committee," and "Miscellaneous-Section 16(a) Beneficial Ownership Reporting Compliance" is incorporated by reference to Neogen's 2020 proxy statement to be filed within 120 days of May 31, 2020.

We have adopted a Code of Conduct that applies to our directors, officers and employees. This Code of Conduct is available on our website at https://www.neogen.com/globalassets/pdfs/corporate-governance-sec-and-investor-information/codeofconduct.pdf

Information About Our Executive Officers

The officers of Neogen are elected by and serve at the discretion of the Board of Directors. The names and titles of our officers as of May 31, 2020 are set forth below.

Name	Position with the Company	Year Joined the Company
John E. Adent	President & Chief Executive Officer	2017
Stewart W. Bauck, D.V.M., Ph.D.	Vice President, Agrigenomics	2012
Joseph A. Corbett	Vice President, Animal Safety Sales	1993
Robert S. Donofrio, Ph.D.	Vice President, Food Safety Research & Development	2016
Shane M. Fitzwater	Vice President, Animal Safety Operations	2018
Jerome L. Hagedorn	Vice President, Food Safety Operations	2018
Jason W. Lilly, Ph.D.	Vice President, International Business	2005
Julie A. Mann*	Vice President & Chief Human Resources Officer	2017
Terri A. Morrical	Vice President, Animal Safety	1992
Marylinn Munson	Vice President, Agrigenomics	2020
Steven J. Quinlan	Vice President & Chief Financial Officer	2011

** Ms. Mann was promoted to this position on June 1, 2020.*

Information concerning the officers of Neogen follows:

John E. Adent, age 52, joined Neogen as Chief Executive Officer on July 17, 2017. Prior to joining Neogen, Mr. Adent served as the Chief Executive Officer of Animal Health International, Inc., formerly known as Lextron, Inc., from 2004 to 2015, also serving as its President during that time. Animal Health International was sold to Patterson Companies, Inc. in 2015, and Mr. Adent served as the Chief Executive Officer of the $3.3 billion Animal Health Division of Patterson Animal Health from that period until his resignation on July 1, 2017. Mr. Adent began his career with management responsibilities for Ralston Purina Company, developing animal feed manufacturing and sales operations in China and the Philippines. When Ralston Purina spun off that business to Agribrands, he continued his management role in the European division in Spain and Hungary, serving as managing director of the Hungarian operations. He left Ralston Purina in 2004.

Dr. Stewart W. Bauck, age 62, joined Neogen in 2012 as our Director of Beef Cattle Genomics, and became General Manager of Neogen's genomics operation in Lincoln, NE in 2013. In December 2016, Dr. Bauck was named Neogen's Vice President, Agrigenomics, responsible for the operation and execution of our genomics strategy. Effective June 1, 2020, Dr. Bauck transitioned into a part-time role of Senior Director, Special Projects, assisting in commercial development opportunities in Canada. Prior to joining Neogen, Dr. Bauck spent 15 years with Merial, Inc., where he created and launched the Igenity livestock production business. Igenity was acquired by Neogen from Merial in May 2012. Dr. Bauck's experience also includes various responsibilities in technical services and management for Merck AgVet, and, earlier in his career, he owned and operated his own private veterinary practice with a major emphasis on food-producing animals.

Joseph A. Corbett, age 51, joined Neogen in December 1993 as a sales representative in the Animal Safety operation based in Lexington, Kentucky. Prior to joining Neogen, he worked for the Marriott Corporation in sales and operations. He has served in various sales, marketing and operational roles in the Neogen Animal Safety segment. He was named Vice President, Animal Safety Sales in October 2014, responsible for all Animal Safety revenues, excluding Genomics and Life Sciences.

Dr. Robert S. Donofrio, age 47, joined Neogen in February 2016 as Director of Microbiology Research and Development, and was promoted to Director of Food Safety Research and Development in December 2016. In April 2018, Dr. Donofrio was named Vice President, Food Safety Research and Development. Prior to joining Neogen, he worked for 15 years at NSF International in various positions of increasing responsibility, including Director of Microbiology and Molecular Biology and Director of Applied Research, where he led efforts in grant research and method development with partners in academia, industry and government. At Neogen, Dr. Donofrio is responsible for our food safety research activities in the U.S., Scotland and England.

Shane M. Fitzwater, age 46, joined Neogen in April 2018 as Vice President, Animal Safety Operations. In his role, Mr. Fitzwater is responsible for manufacturing, quality systems, supply chain, shipping and warehousing for our Animal Safety operations, excluding Genomics. Prior to joining Neogen, he spent 18 years in positions of increasing responsibility at Ecolab, Inc., including five years as Ecolab's Vice President of Supply Chain, Global Specialty Sector. Mr. Fitzwater managed Ecolab's global supply chain for a $750 million business unit with worldwide manufacturing and logistics operations. Before being named a vice president, he spent four years as a director of operations at Ecolab, managing a group of 450 employees and an annual operating budget of $40 million.

Jerome L. Hagedorn, age 54, joined Neogen in April 2018 as Vice President, Food Safety Operations. In the role, Mr. Hagedorn is responsible for the manufacturing, supply chain, shipping and warehousing, production engineering and quality systems for Neogen's Food Safety operations. Prior to joining Neogen, Mr. Hagedorn spent the past eight years as Vice President of Operations at Siemens Healthcare Diagnostics. At Siemens, he was responsible for multiple plant operations, including diagnostic instrument manufacturing and new product introduction. Prior to joining Siemens, Mr. Hagedorn held a variety of senior level positions over a 20 year career, including Director of Manufacturing at Bayer Healthcare in Indiana, Director of Lean Manufacturing at Invensys in Ohio, and Manager of Automated Manufacturing at Siemens Electronic Components in Mexico.

Dr. Jason W. Lilly, age 46, joined Neogen in June 2005 as Market Development Manager for Food Safety. In June 2009, he moved to the Corporate Development group. He was named Vice President of Corporate Development in December 2011, responsible for the identification and acquisition of new business opportunities for the Company. In January 2019, Dr. Lilly was named Vice President, International Business, responsible for Neogen's operations outside of the U.S. and Canada. Prior to joining Neogen, he served in various technical sales and marketing roles at Invitrogen Corporation.

Julie Mann, age 55, joined Neogen in 2017 as Director of Human Resources and was promoted to Senior Director of Human Resources in June 2019. On June 1, 2020, Ms. Mann was named Vice President & Chief Human Resources Officer, with responsibilities for people-focused programs and initiatives for Neogen's more than 1,700 global employees. Ms. Mann has more than 30 years of experience focused on all aspects of strategic human resources including talent acquisition, compensation and benefits, employee development and employee relations. Prior to joining Neogen, Ms. Mann held the positions of Director, Talent Acquisition at Holland, a logistics company, and Director, People Services Consulting at Herman Miller.

Terri A. Morrical, age 55, joined Neogen in September 1992 as part of our acquisition of WTT, Incorporated. She has directed most aspects of our Animal Safety operations since she joined Neogen and currently serves as Vice President responsible for the Animal Safety segment, excluding Genomics. From 1986 to 1991, Ms. Morrical was Controller for Freeze Point Cold Storage Systems and concurrently served in the same capacity for Powercore, Inc. In 1990, she joined WTT, Incorporated as VP/CFO and then became President, the position she held at the time Neogen acquired the business.

Marylinn Munson, age 56, joined Neogen in May 2020 as Vice President, Agrigenomics. Ms. Munson has held positions with increasing responsibility in sales and operations in the life science, biotechnology and agriculture industries for more than 20 years, with an additional seven years of experience in clinical and research labs. In the five years prior to joining Neogen, Ms. Munson was Board Chair at NorthShore Bio, Sr Partner at TNK Associates, LLC (dba Devil Doc Distributors) and provided consulting services at MPower Network. Her previous positions included VP of Global NGS Informatics at Qiagen, VP of Global Business Development and Sales at Biomatrica, Director of Global Sales Operations and America Sales at Illumina, and Global Market/Business Development Manager at Agilent Technologies.

Steven J. Quinlan, age 57, joined Neogen in January 2011 as Vice President and Chief Financial Officer. He was named Secretary in October 2011. He is responsible for all internal and external financial reporting for Neogen, and manages the accounting, information technology corporate purchasing, treasury and investor relations functions. Mr. Quinlan came to Neogen following 19 years at Detrex Corporation (1992-2010), the last eight years serving as Vice President-Finance, CFO and Treasurer. He was on the audit staff at the public accounting firm Price Waterhouse (now PWC) from 1985-1989.

ITEM 11. EXECUTIVE COMPENSATION

The information required by this Item, and pursuant to Regulation 14A of the Exchange Act, is incorporated by reference from the sections entitled "Compensation Discussion and Analysis", "Compensation Committee Report" and "Executive Compensation" in the Company's definitive Proxy Statement to be filed within 120 days of May 31, 2020.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS, MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The information required by this Item, and pursuant to Regulation 14A of the Exchange Act, is incorporated by reference from the section entitled "Security Ownership of Certain Beneficial Owners, Management and Related Stockholder Matters" in the Company's definitive Proxy Statement to be filed within 120 days of May 31, 2020.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required by this Item, and pursuant to Regulation 14A of the Exchange Act, is incorporated by reference from the section entitled "Information about the Board and Corporate Governance Matters" in the Company's definitive Proxy Statement to be filed within 120 days of May 31, 2020.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The information required by this Item, and pursuant to Regulation 14A of the Exchange Act, is incorporated by reference from the section entitled "Proposal 3 — Ratification of the appointment of the Company's independent registered public accounting firm" in the Company's definitive Proxy Statement to be filed within 120 days of May 31, 2020.

PART IV

ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES

(a) (1) and (2) and (c). The response to this portion of ITEM 15 is submitted as a separate section of this report starting on page F-1.

(a) (3) and (b). The Exhibits, listed on the accompanying Exhibit Index on page 40, are incorporated herein by reference.

ITEM 16. FORM 10-K SUMMARY — NONE

EXHIBIT INDEX

EXHIBIT NO.	DESCRIPTION
3.1	Restated Articles of Incorporation, as amended on November 23, 2011 (incorporated by reference to the exhibit 3.1 filed with the Registrant's Quarterly Report on Form 10-Q filed December 30, 2011).
3.2	Certificate of Amendment to Articles of Incorporation filed on October 11, 2010.
3.3	Certificate of Amendment to Articles of Incorporation filed on November 20, 2018 (incorporated by reference to the exhibit filed with the Registrant's Quarterly Report on Form 10-Q filed December 28, 2018).
3.4	By-Laws, as amended (incorporated by reference to Exhibit 3.2 to the Registrant's Quarterly Report on Form 10-Q filed April 14, 2000).
10.1	Neogen Corporation 2007 Stock Option Plan as amended and restated (incorporated by reference to Exhibit A to the Registrant's 2011 Proxy Statement August 31, 2011 filed September 1, 2011).
10.2	Neogen Corporation 2015 Omnibus Incentive Plan (incorporated by reference to Appendix A to the Registrant's 2015 Proxy Statement dated and filed August 25, 2015).
10.3	Neogen Corporation 2018 Omnibus Incentive Plan (incorporated by reference to Appendix A to the Registrant's 2018 Proxy Statement dated and filed August 28, 2018).
10.4	Amended and Restated Credit Agreement dated as of November 30, 2018 between Registrant and JPMorgan Chase N.A. (incorporated by reference to Exhibit 10.A to the registrant's Form 8-K filed on December 6, 2018).
21	Listing of Subsidiaries
23	Consent of Independent Registered Public Accounting Firm BDO USA, LLP
24	Power of Attorney
31.1	Section 302 Certification of Principal Executive Officer
31.2	Section 302 Certification of Principal Financial Officer
32	Certification Pursuant to 18 U.S.C Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
101.INS	Inline XBRL Instance Document
101.SCH	Inline XBRL Taxonomy Extension Schema Document
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	Inline XBRL Taxonomy Extension Definition Document
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document
104	Cover Page Interactive Data File (formatted as inline XBRL and contained in Exhibit 101)

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this Report to be signed on its behalf by the undersigned, thereunto duly authorized.

NEOGEN CORPORATION

By: /s/ John E. Adent	By: /s/ Steven J. Quinlan
John E. Adent, President & Chief Executive Officer (Principal Executive Officer)	Steven J. Quinlan, Vice President & Chief Financial Officer (Principal Financial & Accounting Officer)

Dated: July 30, 2020

Pursuant to the requirements of the Securities Exchange Act of 1934, this Report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

Signature	Title	Date
/s/ John E. Adent John E. Adent	President & Chief Executive Officer (Principal Executive Officer)	July 30, 2020
/s/ Steven J. Quinlan Steven J. Quinlan	Vice President & Chief Financial Officer (Principal Financial & Accounting Officer)	July 30, 2020
* James C. Borel	Chairman of the Board	July 30, 2020
* William T. Boehm, Ph.D.	Director	July 30, 2020
* Ronald D. Green, Ph.D.	Director	July 30, 2020
* James L. Herbert	Director	July 30, 2020
* G. Bruce Papesh	Director	July 30, 2020
* James P. Tobin	Director	July 30, 2020
* Darci L. Vetter	Director	July 30, 2020

*By: /s/ John E. Adent
John E. Adent, Attorney-in-fact July 30, 2020

ANNUAL REPORT ON FORM 10-K

ITEM 15 (a)(1)(a)(2) and (c)

LIST OF FINANCIAL STATEMENTS AND FINANCIAL STATEMENT SCHEDULES

YEAR ENDED MAY 31, 2020

NEOGEN CORPORATION

LANSING, MICHIGAN

FORM 10-K—ITEM 15(a)(1) AND (2) AND 15(c)

LIST OF FINANCIAL STATEMENTS AND FINANCIAL STATEMENT SCHEDULES

The following consolidated financial statements of Neogen Corporation and subsidiaries are included below and incorporated in ITEM 8:

Report of Independent Registered Public Accounting Firm

Consolidated Balance Sheets—May 31, 2020 and 2019

Consolidated Statements of Income—Years ended May 31, 2020, 2019 and 2018

Consolidated Statements of Comprehensive Income—Years ended May 31, 2020, 2019 and 2018

Consolidated Statements of Stockholders' Equity— Years ended May 31, 2020, 2019 and 2018

Consolidated Statements of Cash Flows— Years ended May 31, 2020, 2019 and 2018

Notes to Consolidated Financial Statements

Schedules for which provision is made in the applicable accounting regulation of the United States Securities and Exchange Commission are not required under the related instructions or are inapplicable and, therefore, have been omitted.

Report of Independent Registered Public Accounting Firm

Stockholders and Board of Directors
Neogen Corporation
Lansing, Michigan

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of Neogen Corporation (the "Company") as of May 31, 2020 and 2019, the related consolidated statements of income, comprehensive income, stockholders' equity, and cash flows for each of the three years in the period ended May 31, 2020, 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, 2020 and 2019, and the results of its operations and its cash flows for each of the three years in the period ended May 31, 2020**,** 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, 2020, 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, 2020 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 US federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud.

Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

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

Evaluation of the Accounting for Income Taxes

As described in Notes 1 and 6 to the consolidated financial statements, the Company recorded income tax expense related to US and Foreign tax paying jurisdictions totaling $12.83 million for the year ended May 31, 2020, and deferred income tax liabilities totaling $18.13 million at May 31, 2020. The Company's accounting for income taxes involves the application of tax regulations in each of the foreign tax paying jurisdictions in which it operates. The determination of income subject to income tax in each tax paying jurisdiction requires management to apply transfer pricing guidelines for certain intercompany transactions. Additionally, the Company is entitled to claim foreign tax credits for taxes paid in international tax paying jurisdictions. Management's assumptions and allocations used in the determination of the foreign tax credits are based on current interpretations of complex income tax regulations and can have a material effect on the calculation of US income taxes.

We identified the assumptions and allocations used to calculate foreign taxes and international components of US income taxes to be a critical audit matter. These assumptions and allocations include: (i) interpretation of tax laws in multiple tax paying jurisdictions, (ii) technical merit of tax positions including considerations related to transfer pricing guidelines for certain intercompany transactions, and (iii) allocation methodologies that are subjective in nature. Auditing these assumptions and allocations involved subjective auditor judgment due to the complexity and the extent of specialized knowledge needed.

The primary procedures we performed to address this critical audit matter included:

- Assessing the design and testing operating effectiveness of certain controls over the Company's income tax provision process, including controls over the identification and application of tax laws over earnings from multiple tax jurisdictions and the process to assess the technical merits of tax positions taken.
- Evaluating the reasonableness and appropriateness of the data used to develop the assumptions and allocations made by management against relevant evidence obtained in other areas of the audit.
- Utilizing professionals with specialized skills and knowledge in taxation to evaluate the Company's application of the applicable tax laws, the technical merit of tax positions taken, and the reasonableness of the Company's apportionment methodologies used.

/s/ BDO USA, LLP

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

Grand Rapids, Michigan
July 30, 2020

Neogen Corporation and Subsidiaries
Consolidated Balance Sheets – Assets
(in thousands)

	May 31	
	2020	2019
Assets		
Current Assets		
Cash and cash equivalents	$ 66,269	$ 41,688
Marketable securities	277,404	225,836
Accounts receivable, net of allowance of $1,350 and $1,700 at May 31, 2020 and 2019, respectively	84,681	82,582
Inventories	95,053	85,992
Prepaid expenses and other current assets	13,999	13,431
Total Current Assets	537,406	449,529
Property and Equipment		
Land and improvements	5,456	5,324
Building and improvements	48,881	46,205
Machinery and equipment	90,351	82,752
Furniture and fixtures	4,324	3,895
Construction in progress	4,968	2,294
	153,980	140,470
Less accumulated depreciation	75,309	65,623
Net Property and Equipment	78,671	74,847
Other Assets		
Right of use assets	1,952	—
Goodwill	110,340	103,619
Other non-amortizable intangible assets	15,217	15,510
Amortizable intangible assets, net of accumulated amortization of $44,690 and $40,835 at May 31, 2020 and 2019, respectively	51,364	52,096
Other non-current assets	2,232	139
Total Other Assets	181,105	171,364
Total Assets	$ 797,182	$ 695,740

See accompanying notes to consolidated financial statements.

Neogen Corporation and Subsidiaries
Consolidated Balance Sheets – Liabilities and Stockholders' Equity
(in thousands, except share and per share)

	May 31	
	2020	2019
Liabilities and Stockholders' Equity		
Current Liabilities		
Accounts payable	$ 25,650	$ 19,063
Accruals		
Accrued compensation	7,735	7,085
Income taxes	1,456	601
Other accruals	13,648	11,502
Total Current Liabilities	48,489	38,251
Deferred Income Taxes	18,125	15,618
Other Non-Current Liabilities	5,391	3,972
Total Liabilities	72,005	57,841
Commitments and Contingencies (note 7)		
Stockholders' 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; 52,945,841 and 52,216,589 shares issued and outstanding at May 31, 2020 and 2019, respectively	8,471	8,355
Additional paid-in capital	257,693	221,937
Accumulated other comprehensive loss	(19,709)	(11,640)
Retained earnings	478,722	419,247
Total Neogen Corporation and Subsidiaries Stockholders' Equity	725,177	637,899
Total Liabilities and Stockholders' Equity	$797,182	$695,740

See accompanying notes to consolidated financial statements.

Neogen Corporation and Subsidiaries
Consolidated Statements of Income
(in thousands, except per share)

	Year Ended May 31		
	2020	2019	2018
Revenues			
Product revenues	$335,539	$339,439	$331,288
Service revenues	82,631	74,747	66,642
Total Revenues	418,170	414,186	397,930
Cost of Revenues			
Cost of product revenues	173,566	179,660	173,725
Cost of service revenues	48,325	42,606	37,933
Total Cost of Revenues	221,891	222,266	211,658
Gross Margin	196,279	191,920	186,272
Operating Expenses			
Sales and marketing	69,675	70,230	66,929
General and administrative	44,331	40,791	38,294
Research and development	14,750	12,805	10,855
Total Operating Expenses	128,756	123,826	116,078
Operating Income	67,523	68,094	70,194
Other Income			
Interest income, net	5,992	4,683	2,043
Royalty income	—	150	147
Other, net	(1,210)	32	1,081
Total Other Income	4,782	4,865	3,271
Income Before Income Taxes	72,305	72,959	73,465
Provision for Income Taxes	12,830	12,783	10,250
Net Income	59,475	60,176	63,215
Net Income Attributable to Non-controlling Interest	—	—	(70)
Net Income Attributable to Neogen	$ 59,475	$ 60,176	$ 63,145
Net Income Attributable to Neogen per Share			
Basic	$ 1.13	$ 1.16	$ 1.23
Diluted	$ 1.13	$ 1.15	$ 1.21
Weighted Average Shares Outstanding			
Basic	52,550	51,888	51,358
Diluted	52,860	52,425	52,149

See accompanying notes to consolidated financial statements.

Neogen Corporation and Subsidiaries
Consolidated Statements of Comprehensive Income
(in thousands)

	Year Ended May 31		
	2020	2019	2018
Net Income	$ 59,475	$ 60,176	$ 63,215
Other comprehensive loss, net of tax: foreign currency translations	(8,495)	(1,894)	(2,543)
Other comprehensive income, net of tax: unrealized gain on marketable securities	426	—	—
Comprehensive income	51,406	58,282	60,672
Comprehensive income attributable to non-controlling interest	—	—	(70)
Comprehensive income attributable to Neogen	$ 51,406	$ 58,282	$ 60,602

See accompanying notes to consolidated financial statements.

Neogen Corporation and Subsidiaries
Consolidated Statements of Stockholders' 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, June 1, 2017	50,932,489	$ 8,149	$ 174,742	$ (7,203)	$ 295,926	$ 143	$ 471,757
Exercise of options and share-based compensation expense	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 and share-based compensation expense	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
Exercise of options and share-based compensation expense	707,674	113	34,566	—	—	—	34,679
Issuance of shares under employee stock purchase plan	21,578	3	1,190	—	—	—	1,193
Net income for 2020	—	—	—	—	59,475	—	59,475
Other comprehensive loss	—	—	—	(8,069)	—	—	(8,069)
Balance, May 31, 2020	52,945,841	$ 8,471	$ 257,693	$ (19,709)	$ 478,722	$ —	$ 725,177

See accompanying notes to consolidated financial statements.

Neogen Corporation and Subsidiaries
Consolidated Statements of Cash Flows
(in thousands)

	Year Ended May 31		
	2020	2019	2018
Cash Flows From Operating Activities			
Net income	$ 59,475	$ 60,176	$ 63,215
Adjustments to reconcile net income to net cash from operating activities:			
Depreciation and amortization	18,396	17,624	17,058
Deferred income taxes	1,601	1,197	(2,996)
Share-based compensation	6,468	5,543	4,909
Changes in operating assets and liabilities, net of business acquisitions:			
Accounts receivable	(2,881)	(4,025)	(10,233)
Inventories	(10,011)	(10,437)	(2,647)
Prepaid expenses and other assets	(1,017)	(3,569)	(2,275)
Accounts payable	6,745	(1,461)	4,381
Accruals and other changes	7,102	(1,206)	(2,281)
Net Cash From Operating Activities	85,878	63,842	69,131
Cash Flows For Investing Activities			
Purchase of property, equipment and other non-current intangible assets	(24,052)	(14,661)	(20,946)
Proceeds from the sales of marketable securities	406,731	339,225	299,751
Purchase of marketable securities	(458,300)	(437,324)	(361,419)
Business acquisitions, net of cash acquired	(13,164)	(6,388)	(468)
Net Cash For Investing Activities	(88,785)	(119,148)	(83,082)
Cash Flows From Financing Activities			
Exercise of stock options and other	29,405	17,034	23,261
Repurchase of common stock	—	(3,135)	—
Purchase of non-controlling minority interest	—	—	(423)
Net Cash From Financing Activities	29,405	13,899	22,838
Effect of Foreign Exchange Rate on Cash	(1,917)	21	(3,380)
Net Increase (Decrease) in Cash and Cash Equivalents	24,581	(41,386)	5,507
Cash and Cash Equivalents, Beginning of Year	41,688	83,074	77,567
Cash and Cash Equivalents, End of Year	$ 66,269	$ 41,688	$ 83,074
Supplementary Cash Flow Information			
Income taxes paid, net of refunds	$ 7,364	$ 13,027	$ 14,966

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, 2020. Neogen Latinoamérica was 100% owned as of May 31, 2020 and May 31, 2019; 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%. The non-controlling owners' proportionate share in the income or losses of the subsidiaries was 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 periods presented.

Functional Currency

Our functional currency is the U.S. dollar. We translate our non-U.S. operations' assets and liabilities denominated in foreign currencies into U.S. dollars at current rates of exchange as of the balance sheet date and income and expense items at the average exchange rate for the reporting period. Translation adjustments resulting from exchange rate fluctuations are recorded in other comprehensive income (loss). Gains or losses from foreign currency transactions are included in other income (expense) on our consolidated statement of income.

Recently Adopted Accounting Standards

Leases

On June 1, 2019, the Company adopted ASU No. 2016-02— Leases (Topic 842). Refer to the Leases section of Note 1 for further information.

Recent Accounting Pronouncements Not Yet Adopted

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. Adoption of this guidance will not have a material impact on our consolidated financial statements due to the Company's short-term contractual life of receivables and minimal expected losses.

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. Adoption of this guidance will not have an impact on our 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. Adoption of this guidance will not have an impact on our 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 stockholders' equity. Accumulated other comprehensive income (loss) consists of foreign currency translation adjustments and unrealized gains and losses on our marketable securities.

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 not experienced 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 $66,269,000 and $41,688,000 at May 31, 2020 and 2019, respectively. The carrying value of these assets approximates fair value due to the short maturity of these instruments and is classified as Level 1 in the fair value hierarchy. Cash held by foreign subsidiaries was $13,060,000 and $8,711,000 at May 31, 2020 and 2019, respectively.

Marketable Securities

The Company has marketable securities held by banks or broker-dealers at May 31, 2020, consisting of short-term domestic certificates of deposit of $16,848,000 and commercial paper and U.S. treasuries rated at least A-1/P-1 (short-term) and A/A2 (long-term) with original maturities between 91 days and two years of $260,556,000. Total outstanding marketable securities at May 31, 2020 were $277,404,000; there were $225,836,000 in marketable securities outstanding at May 31, 2019. Changes in market value are monitored and recorded on a monthly basis; in the event of a downgrade in credit quality subsequent to purchase, the marketable security investment is evaluated to determine the appropriate action to take to minimize the overall risk to our marketable security portfolio. 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 current 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 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. Adjustments in the fair value of these assets are recorded in other comprehensive income.

Marketable Securities as of May 31, 2020 and 2019 are listed below by classification and remaining maturities.

(in thousands)	Maturity	Year ended May 31 2020	2019
US Treasuries	0 – 90 days	$ —	$ 2,470
	91 –180 days	—	—
	181 days –1 year	2,532	2,435
	1 – 2 years	—	2,505
Commercial Paper & Corporate Bonds	0 – 90 days	133,130	84,338
	91 – 180 days	73,824	47,960
	181 days –1 year	43,231	34,369
	1 – 2 years	7,839	34,078
Certificates of Deposit	0 – 90 days	1,003	7,732
	91 – 180 days	5,184	5,000
	181 days –1 year	6,069	750
	1 – 2 years	4,592	4,199
Total Marketable Securities		$ 277,404	$ 225,836

The components of marketable securities at May 31, 2020 are as follows:

(in thousands)	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value
US Treasuries	$ 2,502	$ 30	$ —	$ 2,532
Commercial Paper & Corporate Bonds	257,700	347	(23)	258,024
Certificates of Deposit	16,648	200	—	16,848
Total Marketable Securities	$ 276,850	$ 577	$ (23)	$ 277,404

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. We believe that these estimates have the greatest potential impact on our financial statements, so we consider them to be our critical accounting policies and estimates. 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. Though the impact of the COVID-19 pandemic to our business and operating results presents additional uncertainty, we continue to use the best information available to inform our critical accounting estimates. 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 histories 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, generally after all collection efforts have been exhausted, that amount is charged against the allowance for doubtful accounts. No customer accounted for more than 10% of accounts receivable at May 31, 2020 or 2019, respectively. The activity in the allowance for doubtful accounts was as follows:

	Year ended May 31		
(in thousands)	**2020**	**2019**	**2018**
Beginning Balance	$ 1,700	$ 1,550	$ 2,000
Provision	393	263	152
Recoveries	49	38	40
Write-offs	(792)	(151)	(642)
Ending Balance	$ 1,350	$ 1,700	$ 1,550

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)	**2020**	**2019**
Raw Materials	$ 45,058	$ 41,594
Work-in-process	6,887	5,581
Finished goods	43,108	38,817
	$ 95,053	$ 85,992

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 within cost of sales expense. The valuation allowance for inventory was $2,850,000 and $2,250,000 at May 31, 2020 and 2019, 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 as incurred. 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 $11,907,000, $11,315,000 and $10,315,000 in fiscal years 2020, 2019 and 2018, 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. In evaluating goodwill for impairment, we have the option to first assess the qualitative factors to determine whether it is more likely than not that the fair value of the reporting unit is less than its carrying amount as a basis for determining whether it is necessary to perform the goodwill impairment test. In contrast, we can opt to bypass the qualitative assessment for any reporting unit in any period and proceed directly to assessing the fair value of all of our reporting units and compare the fair value of the reporting unit to carrying value to determine if any impairment is necessary. Doing so does not preclude us from performing the qualitative assessment in any subsequent period. In the fourth quarter of fiscal 2020, we elected to bypass the qualitative approach that allows the assessment of qualitative factors to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount and instead proceeded directly to assessing the fair value of all of our reporting units and comparing the fair values of the reporting units to the carrying values to determine if any impairment is necessary.

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. No goodwill impairments were identified during the years ended May 31, 2020, 2019 and 2018, respectively. The remaining weighted-average amortization period for intangibles was 9 years and 10 years at May 31, 2020 and May 31, 2019, 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. No impairments of long-lived assets were identified during the years ended May 31, 2020, 2019 and 2018, respectively.

Reclassifications

Certain immaterial amounts in the fiscal 2019 and 2018 financial statements have been reclassified to conform with the fiscal 2020 presentation.

Equity Compensation Plans

At May 31, 2020, 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 2020, 2019 and 2018, estimated on the date of grant using the Black-Scholes option pricing model, was $15.56, $14.91 and $14.47, respectively. The fair value of stock options granted was estimated using the following weighted-average assumptions:

	Year ended May 31		
	2020	2019	2018
Risk-free interest rate	1.9%	2.6%	1.6%
Expected dividend yield	0.0%	0.0%	0.0%
Expected stock volatility	29.4%	27.0%	27.7%
Expected option life	3.5 years	3.5 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. We include recent historical experience in estimating our forfeitures. As employees terminate, grant tranches expire or as forfeitures are known, estimated expense is adjusted to actual. For options granted in fiscal years 2020, 2019 and 2018, the Company recorded charges in general and administrative expense based on the fair value of stock options using the straight-line method over the vesting period, generally five years.

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 Ltd, Quat-Chem Ltd, Abtek (Biologicals) Ltd, Neogen Italia S.r.l., Neogen do Brasil, Rogama Industria e Comercio Ltda, Neogen Latinoamérica, Productos Quimicos Magiar S.A., Neogen Uruguay, Neogen Chile SpA, 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, 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. It is not practicable to determine the income tax liability that would be payable if such earnings were not reinvested indefinitely.

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 within sales and marketing as incurred and totaled $1,454,000, $1,471,000 and $1,411,000 in fiscal years 2020, 2019 and 2018, 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)	**2020**	**2019**	**2018**
Numerator for basic and diluted net income per share - Net Income attributable to Neogen	$ 59,475	$ 60,176	$ 63,145
Denominator for basic net income per share - Weighted average shares	52,550	51,888	51,358
Effect of dilutive stock options	310	537	791
Denominator for diluted net income per share	52,860	52,425	52,149
Net income attributable to Neogen per share			
Basic	$ 1.13	$ 1.16	$ 1.23
Diluted	$ 1.13	$ 1.15	$ 1.21

At May 31, 2020, 28,000 potential shares from option exercises 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. At May 31, 2019, 5,000 potential shares were excluded from the computation. At May 31, 2018, all potential shares were included in the computation.

Leases

On June 1, 2019, we adopted Topic 842 using the prospective approach and did not retrospectively apply to prior periods. Topic 842 requires the Company to 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. Upon adoption of Topic 842, we recognized all leases with terms greater than 12 months in duration on our consolidated balance sheets as right-of-use assets and lease liabilities, each at an approximate balance of $2.0 million. Right-of-use assets are recorded in other assets on our consolidated balance sheets. Current and non-current lease liabilities are recorded in other accruals within current liabilities and other non-current liabilities, respectively, on our consolidated balance sheets. 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.

We lease various manufacturing, laboratory, warehousing and distribution facilities, administrative and sales offices, equipment and vehicles under operating leases. We evaluate our contracts to determine if an arrangement is a lease at inception and classify it as a finance or operating lease. Currently, all of our leases are classified as operating leases. Leased assets and corresponding liabilities are recognized based on the present value of the lease payments over the lease term. Our lease terms may include options to extend when it is reasonably certain that we will exercise that option.

We have made certain assumptions and judgments when applying ASC 842, the most significant of which are:

- We elected the package of practical expedients available for transition that allow us to not reassess whether expired or existing contracts contain leases under the new definition of a lease, lease classification for expired or existing leases and whether previously capitalized initial direct costs would qualify for capitalization under ASC 842.
- We did not elect to use hindsight when considering judgments and estimates such as assessments of lessee options to extend or terminate a lease or purchase the underlying asset.
- For all asset classes, we elected to not recognize a right-of-use asset and lease liability for short-term leases (i.e. leases with a term of 12 months or less).
- For all asset classes, we elected to not separate non-lease components from lease components to which they relate and have accounted for the combined lease and non-lease components as a single lease component.
- The determination of the discount rate used in a lease is our incremental borrowing rate that is based on what we would normally pay to borrow on a collateralized basis over a similar term for an amount equal to the lease payments.

Supplemental balance sheet information related to operating leases was as follows:

(in thousands)	May 31, 2020
Right of use – assets	$ 1,952
Lease liabilities – current	1,054
Lease liabilities – non-current	913

The weighted average remaining lease term and weighted average discount rate were as follows:

	May 31, 2020
Weighted average remaining lease term	2.5 years
Weighted average discount rate	3.2%

Operating lease expenses are classified as cost of revenues or operating expenses on the consolidated statements of income. The components of lease expense were as follows:

(in thousands)	Year Ended May 31, 2020
Operating leases	$ 1,207
Short term leases	166
Total lease expense	$ 1,373

Cash paid for amounts included in the measurement of lease liabilities for operating leases included in cash flows from operations on the statement of cash flows were approximately $1,178,000 for the year ended May 31, 2020. There were no non-cash additions to right-of-use assets obtained from new operating lease liabilities for the year ended May 31, 2020.

Undiscounted future minimum lease payments as of May 31, 2020 were as follows:

(in thousands)	Amount
Years ending May 31, 2021	$1,080
2022	546
2023	286
2024	141
2025 and thereafter	41
Total lease payments	2,094
Less: imputed interest	(112)
Total lease liabilities	$1,982

At May 31, 2019, under ASC 840, Leases, the minimum annual rental payments under our lease agreements were as follows: $1,112,000 in 2020; $810,000 in 2021; $297,000 in 2022; $101,000 in 2023; and none thereafter.

Revenue Recognition

On June 1, 2018, Neogen adopted ASC Topic 606—Revenue from Contracts with Customers (Topic 606) using the full retrospective approach.

We determine 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. We generally recognized revenue at a point in time when all of our performance obligations under the terms of a contract are satisfied. Revenue is recognized upon transfer of control of promised products and services in an amount that reflects the consideration we expect 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.

Certain agreements with customers include discounts or rebates on the sale of products and services applied retrospectively, such as volume rebates achieved by purchasing a specified purchase threshold of goods and services. We account for these discounts as variable consideration and estimate the likelihood of a customer meeting the threshold in order to determine the transaction price using the most predictive approach. We typically use the most-likely-amount method, for incentives that are offered to individual customers, and the expected-value method, for programs that are offered to a broad group of customers. Variable consideration reduces the amount of revenue that is recognized. Rebate obligations related to customer incentive programs are recorded in accrued liabilities; the rebate estimates are adjusted at the end of each applicable measurement 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. We account for shipping and handling for products as a fulfillment activity when goods are shipped. 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 $13,514,000, $13,503,000 and $12,147,000 in fiscal years 2020, 2019 and 2018, respectively. Revenue is recognized net of any tax collected from customers; the taxes are subsequently remitted to governmental authorities. Our 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.

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, 2020, 2019 and 2018:

	Year Ended				
(dollars in thousands)	May 31, 2020	Increase/ (Decrease)	May 31, 2019	Increase/ (Decrease)	May 31, 2018
Food Safety:					
Natural Toxins, Allergens & Drug Residues	$ 76,207	(3)%	$ 78,373	7%	$ 72,962
Bacterial & General Sanitation	41,780	(0)%	41,966	10%	38,156
Culture Media & Other	47,847	(4)%	49,857	13%	44,271
Rodenticides, Insecticides & Disinfectants	28,890	13%	25,584	7%	23,821
Genomics Services	17,967	2%	17,694	16%	15,267
	212,691	(0)%	213,474	10%	194,477
Animal Safety:					
Life Sciences	6,322	(20)%	7,858	(25)%	10,411
Veterinary Instruments & Disposables	42,941	(4)%	44,582	(7)%	47,749
Animal Care & Other	28,389	(5)%	29,941	(3)%	30,930
Rodenticides, Insecticides & Disinfectants	68,815	4%	66,389	(2)%	67,646
Genomics Services	59,012	14%	51,942	11%	46,717
	205,479	2%	200,712	(1)%	203,453
Total Revenue	$ 418,170	1%	$ 414,186	4%	$ 397,930

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. We 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 revised the financials for fiscal year 2018 to conform to the current period presentation. These immaterial adjustments had no impact on Neogen'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 year ended May 31, 2018. Revised consolidated statements of income related to these periods are presented in this Form 10-K.

(in thousands)	Year Ended May 31, 2018		
	As Previously Reported	Adjustments	As Revised
Revenues			
Product revenues	$335,554	$ (4,266)	$331,288
Service revenues	66,698	(56)	66,642
Total revenues	402,252	(4,322)	397,930
Cost of revenues			
Cost of product revenues	174,067	(342)	173,725
Cost of service revenues	37,933	—	37,933
Total cost of revenues	212,000	(342)	211,658
Gross margin	190,252	(3,980)	186,272
Operating expenses			
Sales and marketing	70,909	(3,980)	66,929
Total operating expenses	120,058	(3,980)	116,078
Operating income	70,194	—	70,194

The revisions had no impact our audited consolidated statement of equity or audited consolidated statement of cash flows for the year ended May 31, 2018.

2. Goodwill and Other Intangible Assets

Management 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 2020, 2019 and 2018, respectively, and determined that recorded amounts were not 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, 2018	$ 40,001	$ 59,557	$ 99,558
Goodwill acquired	3,796	1,196	4,992
Goodwill and/or currency adjustments (1)	(1,244)	313	(931)
Balance, May 31, 2019	$ 42,553	$ 61,066	$103,619
Goodwill acquired	6,254	2,095	8,349
Goodwill and/or currency adjustments (1)	(1,592)	(36)	(1,628)
Balance, May 31, 2020	$ 47,215	$ 63,125	$110,340

(1) Includes final purchase price allocation adjustments and currency adjustments for goodwill recorded at international locations.

At May 31, 2020, non-amortizable intangible assets included licenses of $569,000, trademarks of $13,424,000 and other intangibles of $1,224,000. At May 31, 2019, non-amortizable intangible assets included licenses of $569,000, trademarks of $13,717,000 and other intangibles of $1,224,000.

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	$10,346	$ 3,330	$ 7,016
Covenants not to compete	706	407	299
Patents	8,509	4,118	4,391
Customer-based intangibles	59,847	29,898	29,949
Other products and service-related intangibles	16,646	6,937	9,709
Balance, May 31, 2020	$96,054	$ 44,690	$51,364
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 products and service-related intangibles	16,464	5,524	10,940
Balance, May 31, 2019	$92,931	$ 40,835	$52,096

Amortization expense for intangibles totaled $6,489,000, $6,309,000 and $6,743,000 in fiscal years 2020, 2019, and 2018, respectively. The estimated amortization expense for each of the five succeeding fiscal years is as follows: $6,573,000 in 2021, $6,445,000 in 2022, $6,006,000 in 2023, $5,700,000 in 2024 and $5,370,000 in 2025. The amortizable intangible assets useful lives are 2 to 20 years for licenses, 3 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 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 all of 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; this acquisition has given the Company the ability to sell this product to new markets. Consideration for the purchase was $4,204,000 in cash and $1,256,000 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. Since February 2019, $270,000 has been 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 had been a long-time strategic partner of Neogen and the acquisition enhanced 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 up to $585,000 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. In September 2019, the former owner was paid the $400,000 installment of the purchase price owed and was also paid $107,000 in contingent consideration based on the achievement of sales targets in the first year. 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 was 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.

Fiscal 2020

On January 1, 2020, the Company acquired all of the stock of Productos Quimicos Magiar, a distributor of Neogen's Food Safety products for the past 20 years, located in Argentina. This acquisition gives Neogen a direct sales presence in Argentina. Consideration for the purchase was $3,776,000 in net cash, with $3,237,000 paid at closing and $540,000 payable to the former owner on January 1, 2022, and up to $979,000 of contingent consideration, payable in one year, based upon an excess net sales formula. The preliminary purchase price allocation, based upon the fair value of these assets and liabilities determined using the income approach, included accounts receivable of $603,000, inventory of $446,000, machinery and equipment of $36,000, other current assets of $221,000, accounts payable of $383,000, other current liabilities of $312,000, contingent consideration accrual of $640,000, non-current deferred tax liabilities of $441,000, intangible assets of $1,471,000 (with an estimated life of 5-10 years) and the remainder to goodwill (non-deductible for tax purposes). These values are Level 3 fair value measurements. This operation continues to operate from its current location in Buenos Aires, Argentina, reporting within the Food Safety segment. It is managed through Neogen's Latin America operation.

On January 1, 2020, the Company acquired all of the stock of Productos Quimicos Magiar, a distributor of Neogen's Food Safety products for the past 20 years, located in Uruguay. This acquisition gives Neogen a direct sales presence in Uruguay. Consideration for the purchase was $1,488,000 in net cash, with $1,278,000 paid at closing and $210,000 payable to the former owner on January 1, 2022, and up to $241,000 in contingent consideration, payable in one year, based upon an excess net sales formula. The preliminary purchase price allocation, based upon the fair value of these assets and liabilities determined using the income approach, included accounts receivable of $280,000, inventory of $174,000, machinery and equipment of $16,000, other current assets of $68,000, accounts payable of $204,000, other current liabilities of $11,000, contingent consideration accrual of

$159,000, non-current deferred tax liabilities of $99,000, intangible assets of $398,000 (with an estimated life of 5-10 years) and the remainder to goodwill (non-deductible for tax purposes). These values are Level 3 fair value measurements. This operation continues to operate from its current location in Montevideo, Uruguay, reporting within the Food Safety segment. It is managed through Neogen's Latin America operation.

On January 9, 2020, the Company acquired the stock of Diessechem Srl, a distributor of food and feed diagnostics for the past 27 years, located in Italy. This acquisition gives Neogen a direct sales presence in Italy. Consideration for the purchase was $3,455,000 in net cash. The preliminary purchase price allocation, based upon the fair value of these assets and liabilities determined using the income approach, included accounts receivable of $780,000, inventory of $5,000, other current assets of $160,000, accounts payable of $140,000, other current liabilities of $305,000, non-current deferred tax liabilities of $294,000, intangible assets of $1,225,000 (with an estimated life of 5-10 years) and the remainder to goodwill (non-deductible for tax purposes). These values are Level 3 fair value measurements. This operation continues to operate from its current location in Milan, Italy, reporting within the Food Safety segment. It is managed through Neogen's Scotland operation.

On January 31, 2020, the Company acquired the stock of Abtek Biologicals Limited, a manufacturer and supplier of culture media supplements and microbiology technologies. This acquisition enhances the Company's culture media product line offering for the worldwide industrial microbiology markets. Consideration for the purchase was $1,401,000 in net cash, with $1,282,000 paid at closing and $119,000 payable to the former owner on January 31, 2021. The preliminary purchase price allocation, based upon the fair value of these assets and liabilities determined using the income approach, included accounts receivable of $135,000, inventory of $207,000, machinery and equipment of $105,000, prepayments of $6,000, accounts payable of $118,000, other current liabilities of $34,000, non-current deferred tax liabilities of $92,000, intangible assets of $484,000 (with an estimated life of 5-10 years) and the remainder to goodwill (non-deductible for tax purposes). These values are Level 3 fair value measurements. This manufacturing operation continues to operate from its current location in Liverpool, England, reporting within the Food Safety segment. It is managed through Neogen's Scotland operation.

On February 28, 2020, the Company acquired the assets of Cell BioSciences, an Australian distributor of food safety and industrial microbiology products. This acquisition gave Neogen a direct sales presence across Australasia for its entire product portfolio. Consideration for the purchase was $3,768,000 in cash, with $3,596,000 paid at closing and $172,000 payable in one year. The preliminary purchase price allocation, based upon the fair value of these assets and liabilities determined using the income approach, included inventory of $420,000, unearned revenue liability of $13,000, intangible assets of $1,338,000 (with an estimated life of 3 to 10 years) and the remainder to goodwill (non-deductible for tax purposes). The business operates in Gatton, Australia, reporting within the Australian operations in the Animal Safety segment.

On March 26, 2020, the Company acquired the assets of Chile-based Magiar Chilena, a distributor of food, animal and plant diagnostics, including Neogen products. This acquisition gives Neogen a direct sales presence in Chile. Consideration for the purchase was $400,000 in cash, with $350,000 paid at closing and $50,000 payable to the former owner on March 26, 2021. The preliminary purchase price allocation, based upon the fair value of these assets and liabilities determined using the income approach, included inventory of $164,000, machinery and equipment of $53,000, and intangible assets of $183,000 (with an estimated life of 5-10 years). The business is operated from its current location in Santiago, Chile, reporting within the Food Safety segment. It is managed through Neogen's Latin America operation.

For each acquisition listed above, the revenues and net income were not considered material and were therefore not disclosed.

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 expires on September 30, 2021. There were no advances against the line of credit during fiscal years 2020 and 2019; there was no balance outstanding at May 31, 2020. Interest on any borrowings is LIBOR plus 100 basis points (rate under the terms of the agreement was 1.24% at May 31, 2020). Financial covenants include maintaining specified levels of tangible net worth, debt service coverage, and funded debt to EBITDA; the Company believes it was in compliance with these covenants at May 31, 2020.

5. Equity Compensation Plans

Incentive and non-qualified options to purchase shares of common stock have been granted to directors, officers and employees of Neogen under the terms of the Company's stock option plans. These options were 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 3,501,000, 3,997,000 and 1,913,000 at May 31, 2020, 2019 and 2018, 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, 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
Granted	562	63.91	15.56
Exercised	(719)	40.24	11.05
Forfeited	(66)	57.44	14.20
Outstanding at May 31, 2020 (486 exercisable)	2,162	55.96	13.95

The following is a summary of stock options outstanding at May 31, 2020:

(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
$16.82 - $40.91	507	1.4	$ 37.26	208	$ 34.94
$40.92 - $61.56	605	2.6	58.59	183	57.43
$61.57 - $62.88	465	3.5	62.70	85	62.70
$62.89 - $64.05	539	4.4	63.90	—	—
$64.06 - $68.96	46	3.6	66.48	10	67.98
	2,162	3.0	55.96	486	48.94

The weighted average exercise price of shares that were exercisable at May 31, 2020 and 2019 was $48.94 and $40.68, respectively.

Compensation expense related to share-based awards was $6,468,000, $5,543,000 and $4,909,000 in fiscal years 2020, 2019 and 2018, respectively. Remaining compensation cost to be expensed in future periods for non-vested options was $16,949,000 at May 31, 2020, with a weighted average expense recognition period of 3.2 years.

(in thousands)	Year Ended May 31, 2020	May 31, 2019	May 31, 2018
Aggregate intrinsic value of options outstanding	$ 32,988	$ 22,798	$ 82,649
Aggregate intrinsic value of options exercisable	10,814	10,222	22,572
Aggregate intrinsic value of options exercised	19,597	21,382	25,844

The Company offers 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 under the terms of the 2011 Employee Stock Purchase Plan; 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 through this program were 21,578 in fiscal 2020, 18,330 in fiscal 2019 and 22,127 in fiscal 2018. Common stock totaling 343,817 of the 712,500 authorized shares are reserved for issuance under the plan.

6. Income Taxes

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

	Year ended May 31		
(in thousands)	**2020**	**2019**	**2018**
U.S.	$62,329	$58,479	$62,310
Foreign	9,976	14,480	11,155
	$72,305	$72,959	$73,465

The provision for income taxes consists of the following:

	Year ended May 31		
(in thousands)	**2020**	**2019**	**2018**
Current			
Domestic			
Federal	$ 6,886	$ 7,173	$ 9,715
Uncertain tax provision	269	13	(963)
State	1,262	1,265	1,377
Foreign	2,475	3,758	3,066
Deferred			
Domestic			
Federal	1,964	1,031	(1,981)
State	195	98	(355)
Foreign	(221)	(555)	(609)
Provision for Income Taxes	$12,830	$12,783	$10,250

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

(in thousands)	Year ended May 31 2020	2019	2018
Tax at U.S. statutory rate	$15,184	$15,321	$21,459
Permanent differences	360	(56)	
Section 199 domestic production deduction	—	—	(1,167)
Global intangible low-taxed income (GILTI)	438	840	—
Foreign derived intangible income deduction (FDII)	(1,120)	(1,531)	—
Foreign rate differential	(182)	495	(461)
Subpart F income	634	842	816
Tax benefits on stock-based compensation	(1,998)	(2,586)	(4,816)
Changes in tax contingencies - Increase/(Release)	269	13	(1,035)
Provision for state income taxes, net of federal benefit	1,412	1,251	975
Remeasurement of deferred taxes	—	—	(6,022)
Transition tax on foreign earnings and profits	—	—	1,223
Tax credits	(1,417)	(1,726)	(1,151)
Other	(750)	(80)	429
Tax Expense	$12,830	$12,783	$10,250

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 $2.0 million in fiscal 2020, 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 $945,000, $1,296,000 and $791,000 in fiscal years 2020, 2019 and 2018, respectively. The Company’s U.S. research and development credits were $472,000, $430,000 and $422,000 in fiscal years 2020, 2019 and 2018, respectively.

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)	**2020**	**2019**
Deferred income tax liabilities		
Indefinite and long-lived assets	$(20,867)	$(18,963)
Prepaid expenses	(795)	(586)
	(21,662)	(19,549)
Deferred income tax assets		
Stock options	1,479	1,497
Inventories and accounts receivable	1,336	1,315
Tax loss carryforwards	484	417
Accrued expenses and other	657	1,109
Less: Valuation allowance	(419)	(407)
	3,537	3,931
Net deferred income tax liabilities	$(18,125)	$(15,618)

The Company has the following net operating loss carryforwards:

Jurisdiction	**As of May 31, 2020**	**Expiry**
U.S.	$ 408	2037 to indefinite
Foreign	1,354	2024 to 2039
	$ 1,762	

We are subject to income taxes in the U.S. (federal and state) and in numerous foreign jurisdictions. Significant judgment is required in evaluating our tax positions and determining our provision for income taxes. During the ordinary course of business, there are transactions and calculations for which the ultimate tax determination is uncertain. We establish reserves for tax-related uncertainties based on estimates of whether, and the extent to which, additional taxes will be due. These reserves are established when we believe that certain positions might be challenged despite our belief that our tax return positions are fully supportable. We adjust these reserves in light of changing facts and circumstances, such as the outcome of tax audits. The provision for income taxes includes the impact of reserve provisions and changes to reserves that are considered appropriate.

The reconciliation of our tax uncertainties is as follows:

	Year ended May 31		
(in thousands)	**2020**	**2019**	**2018**
Beginning balance	$611	$ 598	$ 1,633
Increase/(decrease) related to prior periods	56	(106)	(1,157)
Increase to current period	213	119	122
Ending balance	$880	$ 611	$ 598

The Company is no longer subject to examination by the Internal Revenue Service for fiscal year 2016 and preceding 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. We expense 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, 2020 and 2019, 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 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 currently 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 royalties on the sale of certain products. Royalty expense, recorded in sales and marketing, under the terms of these agreements was $2,524,000, $2,795,000 and $2,876,000 for fiscal years 2020, 2019 and 2018, 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: 2021—$182,000, 2022—$110,000, 2023—$105,000, 2024—$105,000 and 2025—$105,000.

We lease office and manufacturing facilities, vehicles and equipment under non-cancelable operating leases. Rent expense for fiscal years 2020, 2019 and 2018 was $1,373,000, $1,633,000 and $1,083,000, respectively.

The Company is subject to certain legal and other proceedings in the normal course of business that, in the opinion of management, are not expected to 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% of deferred compensation. Neogen's expense under this plan was $1,535,000, $1,361,000, and $1,325,000 in fiscal years 2020, 2019 and 2018, 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.

Neogen's operation in Australia originally focused on providing genomics services and sales of animal safety products and reports through the Animal Safety segment. With the acquisition of Cell BioSciences in February 2020, this operation has expanded to offer our complete line of products and services, including those usually associated with the Food Safety segment. These additional products are managed and directed by existing management at Neogen Australasia and report through the Animal 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 2020				
Product revenues to external customers	$189,893	$ 145,646	$ —	$335,539
Service revenues to external customers	22,798	59,833	—	82,631
Total revenues to external customers	212,691	205,479	—	418,170
Operating income (loss)	33,526	39,051	(5,054)	67,523
Depreciation and amortization	10,173	8,223	—	18,396
Total Assets	222,331	231,178	343,673	797,182
Expenditures for long-lived assets	15,867	8,185	—	24,052
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

(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:

(in thousands)	Year ended May 31 2020	2019
Domestic	$253,458	$248,304
International	164,712	165,882
Total revenue	418,170	414,186

10. Stock Repurchases

In October 2018, the Company's Board of Directors passed a resolution terminating 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 open market transactions for a total price, including commissions, of $3,134,727. Shares acquired under the program were retired. A total of 2,950,000 shares of common stock remain available for repurchase under this program as of May 31, 2020.

11. Summary of Quarterly Data (Unaudited)

	Quarter Ended			
(in thousands, except per share)	August 2019	November 2019	February 2020	May 2020
Total Revenue	$101,424	$107,803	$99,869	$109,074
Gross Margin	48,194	51,026	45,330	51,729
Net income	14,652	16,276	12,200	16,347
Basic net income per share	$ 0.28	$ 0.31	$ 0.23	$ 0.31
Diluted net income per share	$ 0.28	$ 0.31	$ 0.23	$ 0.31

	Quarter Ended			
(in thousands, except per share)	August 2018	November 2018	February 2019	May 2019
Total Revenue	$ 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

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.

EXHIBIT 3.2

Michigan Department of Energy, Labor & Economic Growth

Filing Endorsement

This is to Certify that the CERTIFICATE OF AMENDMENT - CORPORATION

for

NEOGEN CORPORATION

ID NUMBER: 059092

received by facsimile transmission on October 11, 2010 is hereby endorsed

Filed on October 11, 2010 by the Administrator.

The document is effective on the date filed, unless a subsequent effective date within 90 days after received date is stated in the document.

In testimony whereof, I have hereunto set my hand and affixed the Seal of the Department, in the City of Lansing, this 11TH day of October, 2010.

Director

BCS/CD-515 (Rev. 06/10)

MICHIGAN DEPARTMENT OF ENERGY, LABOR & ECONOMIC GROWTH
BUREAU OF COMMERCIAL SERVICES

Date Received

This document is effective on the date filed, unless a subsequent effective date within 90 days after received date is stated in the document.

Name
Richard C. Lowe, Lowe Law Firm, PC

Address
2375 Woodlake Drive, Suite 380

City: Okemos | State: MI | ZIP Code: 48864

EFFECTIVE DATE:

Document will be returned to the name and address you enter above. If left blank, document will be returned to the registered office.

CERTIFICATE OF AMENDMENT TO THE ARTICLES OF INCORPORATION

For use by Domestic Profit and Nonprofit Corporations
(Please read information and instructions on the last page)

Pursuant to the provisions of Act 284, Public Acts of 1972, (profit corporations), or Act 162, Public Acts of 1982 (nonprofit corporations), the undersigned corporation executes the following Certificate:

1. The present name of the corporation is:

   Neogen Corporation

2. The identification number assigned by the Bureau is: 059092

3. Article III of the Articles of Incorporation is hereby amended to read as follows:

The total authorized shares:

Common Shares:	30,000,000	Preferred Shares:	100,000
Par Value:	$0.16	Par Value:	$1.00

A statement of all or any of the relative rights, preferences and limitations of the shares of each class is as follows:

The Preferred Stock shall be issued from time to time in one or more series of such number of shares with such distinctive serial designations and (a) may have such voting powers; (b) may be subject to redemption at such time or times and at such prices; (c) may be entitled to receive dividends (which may be cumulative or non-cumulative) at such rate or rates, on such conditions, and at such times, and payable in preference to, or in such relation to, the dividends payable on any other class or classes or series of stock; (d) may have such rights upon the dissolution of or upon any distribution of the assets of, the Company; (e) may be convertible into, or exchangeable for, shares of any other class or classes or of any other series of the same or any other class or classes of stock of the Company, at such price or prices or at such rates of exchange, and with such adjustments; and (f) may have such other relative participation, optional or other special rights, preferences, qualifications, limitations, or restrictions thereof, all as shall hereafter be stated and expressed in the resolution or resolutions providing for the issue of each such series of Preferred Stock from time to time adopted by the Board of Directors pursuant to the authority so to do which is hereby expressly vested in the Board of Directors.

COMPLETE ONLY ONE OF THE FOLLOWING:

4. Profit or Nonprofit Corporations: For amendments adopted by unanimous consent of incorporators before the first meeting of the board of directors or trustees.

The foregoing amendment to the Articles of Incorporation was duly adopted on the _____ day of _____, _____, in accordance with the provisions of the Act by the unanimous consent of the incorporator(s) before the first meeting of the Board of Directors or Trustees.

Signed this _____ day of _____, _____

_____ (Signature)	_____ (Signature)
_____ (Type or Print Name)	_____ (Type or Print Name)
_____ (Signature)	_____ (Signature)
_____ (Type or Print Name)	_____ (Type or Print Name)

5. Profit Corporation Only: Shareholder or Board Approval

The foregoing amendment to the Articles of Incorporation proposed by the board was was duly adopted on the 11th day of October, 2007, by the: (check one of the following)

- ☑ shareholders at a meeting in accordance with Section 611(3) of the Act.
- ☐ written consent of the shareholders having not less than the minimum number of votes required by statute in accordance with Section 407(1) of the Act. Written notice to shareholders who have not consented in writing has been given. (Note: Written consent by less than all of the shareholders is permitted only if such provision appears in the Articles of Incorporation.)
- ☐ written consent of all the shareholders entitled to vote in accordance with Section 407(2) of the Act.
- ☐ board of a profit corporation pursuant to section 611(2) of the Act.

Profit Corporations and Professional Service Corporations

Signed this 7th day of October, 2010

By _____ (Signature of an authorized officer or agent)

James L. Herbert, Chief Executive Officer (Type or Print Name)

EXHIBIT 21
SUBSIDIARIES OF THE REGISTRANT
NEOGEN CORPORATION AND SUBSIDIARIES
May 31, 2020

	WHERE INCORPORATED	PERCENTAGE OWNED BY NEOGEN CORPORATION
Abtek (Biologicals) Ltd	England, United Kingdom	100%
Acumedia Manufacturers, Inc.	Michigan, U.S.	100%
Chem-Tech, Ltd.	Michigan, U.S.	100%
GeneSeek, Inc.	Nebraska, U.S.	100%
Hacco, Inc.	Michigan, U.S.	100%
Lab M Ltd	England, United Kingdom	100%
Neogen Australasia Pty Limited	Australia	100%
Neogen Canada	Canada	100%
Neogen Chile SpA	Chile	100%
Neogen do Brasil Productos Para Labratories LTDA.	Brazil	100%
Neogen Europe Limited	Scotland, United Kingdom	100%
Neogen Italia S.r.l.	Italy	100%
Neogen Latinoamerica S.A.P.I. DE C.V.	Mexico	100%
Neogen Bio-Scientific Technology (Shanghai) Co., Ltd.	China	100%
Neogen Food and Animal Security (India) PVT, LTD	India	100%
Neogen Properties, LLC II	Michigan, U.S.	100%
Neogen Properties, LLC III	Michigan, U.S.	100%
Neogen Properties, LLC V	Michigan, U.S.	100%
Neogen Properties, LLC VI	Michigan, U.S.	100%
Neogen Properties, LLC VII	Nebraska, U.S.	100%
Neogen Uruguay	Uruguay	100%
Preserve International	Nevada, U.S.	100%
Productos Quimicos Magiar S.A.	Argentina	100%
Quat-Chem Ltd.	England, United Kingdom	100%
Rogama Industria Comercio Ltda.	Brazil	100%

All subsidiaries listed above are included in the consolidated financial statements of Neogen Corporation.

EXHIBIT 23
Consent of Independent Registered Public Accounting Firm

Neogen Corporation
Lansing, Michigan

We hereby consent to the incorporation by reference in the Registration Statement on Form S-8 (No. 333-184176) of Neogen Corporation of our reports dated July 30, 2020, relating to the consolidated financial statements, and the effectiveness of Neogen Corporation's internal control over financial reporting, which appear in this Form 10-K.

/s/ BDO USA, LLP

Grand Rapids, Michigan

July 30, 2020

EXHIBIT 24
POWER OF ATTORNEY APPOINTING
JOHN E. ADENT AND STEVEN J. QUINLAN

Power of Attorney

Each of the undersigned, in his/her capacity as a director, officer, or both, of Neogen Corporation, appoints John E. Adent and Steven J. Quinlan, or either of them, to be his/her true and lawful attorney to execute in his/her name, place and stead, a Report on Form 10-K for the year ended May 31, 2020 and to file the same with any exhibits or amendments thereto and other documents in connection therewith, with the Securities and Exchange Commission. John E. Adent and Steven J. Quinlan shall have full power and authority to do and perform in the name and on the behalf of each of the undersigned, in any capacity, every act required or necessary to be done as fully as each of the undersigned might or could do in person.

Signature	Title	Date
/s/ John E. Adent John E. Adent	President & Chief Executive Officer (Principal Executive Officer)	July 30, 2020
/s/ Steven J. Quinlan Steven J. Quinlan	Vice President & Chief Financial Officer (Principal Financial & Accounting Officer)	July 30, 2020
/s/ James C. Borel James C. Borel	Chairman of the Board of Directors	July 30, 2020
/s/ William T. Boehm, Ph.D. William T. Boehm, Ph.D.	Director	July 30, 2020
/s/ Ronald D. Green, Ph.D. Ronald D. Green, Ph.D.	Director	July 30, 2020
/s/ James L. Herbert James L. Herbert	Director	July 30, 2020
/s/ G. Bruce Papesh G. Bruce Papesh	Director	July 30, 2020
/s/ James P. Tobin James P. Tobin	Director	July 30, 2020
/s/ Darci L. Vetter Darci L. Vetter	Director	July 30, 2020

EXHIBIT 31.1
CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER
PURSUANT TO RULES 13a-14(a) and 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934,
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002
NEOGEN CORPORATION AND SUBSIDIARIES

I, John E. Adent, certify that:

1. I have reviewed this Annual Report on Form 10-K for the period ended May 31, 2020 of Neogen Corporation;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

    a) designed such disclosure controls and procedures or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;

    c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting.

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting to the registrant's auditors and the audit committee of the registrant's board of directors:

    a) all significant deficiencies and material weaknesses in the design or operation of internal controls over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

    b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Dated: July 30, 2020

/s/ John E. Adent
John E. Adent
President & Chief Executive Officer
(Principal Executive Officer)

EXHIBIT 31.2
CERTIFICATION OF PRINCIPAL ACCOUNTING OFFICER
PURSUANT TO RULES 13a-14(a) and 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934,
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002
NEOGEN CORPORATION AND SUBSIDIARIES

I, Steven J. Quinlan, certify that:

1. I have reviewed this Annual Report on Form 10-K for the period ended May 31, 2020 of Neogen Corporation;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

    a) designed such disclosure controls and procedures or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;

    c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting.

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting to the registrant's auditors and the audit committee of the registrant's board of directors:

    a) all significant deficiencies and material weaknesses in the design or operation of internal controls over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

    b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Dated: July 30, 2020

/s/ Steven J. Quinlan
Steven J. Quinlan
Vice President & Chief Financial Officer
(Principal Financial & Accounting Officer)

EXHIBIT 32
NEOGEN CORPORATION

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with this Annual Report on Form 10-K of Neogen Corporation (the "Company") for the period ended May 31, 2020 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, John E. Adent, as Chief Executive Officer and I, Steven J. Quinlan, as Chief Accounting Officer, hereby certify pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

(1) This Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) Information contained in this Report fairly presents, in all material respects, the financial condition and result of operations of the Company.

Date: July 30, 2020

/s/ John E. Adent
John E. Adent
President & Chief Executive Officer
(Principal Executive Officer)

/s/ Steven J. Quinlan
Steven J. Quinlan
Vice President & Chief Financial Officer
(Principal Financial & Accounting Officer)

A signed original of this written statement required by Section 906 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.