

# AGRICULTURAL BUSINESS PATHWAY



## Production Manager

Production Managers work in a variety of settings within agriculture including animal production, seed and chemical production, and the food sector. They are responsible for overseeing day to day activities as they relate to the successful production of the product the company produces.

### What education and training is required?

A bachelor's degree in agricultural business, food science, animal or poultry science, is needed. Some roles may also be obtainable with an associate degree.

### To pursue a career as a production manager:

The following high school courses are recommended: agricultural education, animal science, mathematics, Spanish, biology and chemistry.

### Where can I work?

Production managers work in food processing facilities ranging from meat to dry packaged goods. As well in live animal production settings and in the chemical/biotech industry.

Salary range: \$51,641 - \$117,394

Average salary: \$77,861



# AGRICULTURAL BUSINESS PATHWAY



## Grain Elevator Manager

Grain Elevator Managers are responsible for storing grain, shipping grain to processing facilities, and buying grain from farmers.

### What education and training is required?

An associates or more preferably bachelor's degree in agricultural business, economics, marketing or agronomic related area is needed to pursue a career as a Grain Elevator Manager.

### To pursue a career as a Grain Elevator Manager:

The following high school courses are recommended: agricultural education, biology, chemistry and mathematics.

### Typical Employers:

Agricultural retail suppliers, processing companies and cooperatives.

Salary range: \$69,808 - \$94,492

Average salary: \$80,560





# AGRICULTURAL BUSINESS PATHWAY



## Public Relations Specialist

Public Relations Specialists develop and correlate an influential company brand for clients and employees.

### What education and training is required?

A bachelor's degree in agricultural business, marketing, journalism, communications, education or business administration.

### To pursue a career as a Public Relations Specialist:

The following high school courses are recommended: agricultural education, science and mathematics.

### Typical Employers:

Seed, feed, fuel, fertilizer, plant, animal pharmaceuticals, equipment, companies as well as advertising agencies or you may be self-employed.

Salary range: \$21,500 - \$214,000

Average salary: \$100,755



# AGRICULTURAL BUSINESS PATHWAY



## Ag Ed/Communications Marketing Specialist

Marketing Specialists are responsible for getting the appropriate communication message and medium delivered to the public. By doing so, they ensure that the company meets their sales goals. Marketing Specialists also watch over companies/clients promotions for their products and services through their marketing skill sets.

### What education and training is required?

A bachelor's degree in agricultural business, marketing, journalism, communications, education or business administration.

### To pursue a career as a Marketing Specialist:

The following high school courses are recommended: agricultural education, science and mathematics.

### Typical Employers:

Seed, feed, fuel, fertilizer, plant, animal pharmaceuticals, equipment, companies as well as advertising agencies or you may be self-employed.

Salary Range: \$21,500 - \$214,000

Average Salary: \$100,755





# AGRICULTURAL BUSINESS PATHWAY



## Communications Specialist

A Communications Specialist works in the area of communications with primary responsibilities in the fields of writing, editing, branding, and public and media relations.

### What education and training is required?

A Bachelor's degree in agriculture communications, agriculture marketing, agricultural journalism, communications, public relations or related field.

### To pursue a career as a communications specialist:

The following high school courses are recommended: agricultural education, computer courses, English and public speaking.

### Where can I work?

Communications specialist work for companies and organizations both large and small. You may also work for a marketing agency and work with a variety of companies overseeing their communication strategies. Some communications specialists freelance for different companies and are self-employed.

Salary Range: \$15,997 - \$76,328  
Average Salary: \$47,225



# AGRICULTURAL BUSINESS PATHWAY



## Sales Representative - Food, Seed, Feed, Fuel

Sales Representatives for food, seed, feed, and fuel market their certain product to different companies within the agricultural sector including producers, suppliers, and dealers. To be able to do so, they are given a certain territory to work within.

### What education and training is required?

A bachelor's degree in agricultural business or agricultural major that relates to the product you are representing i.e. agronomy, animal, poultry, horticulture, etc.

### To pursue a career as a Sales Representatives:

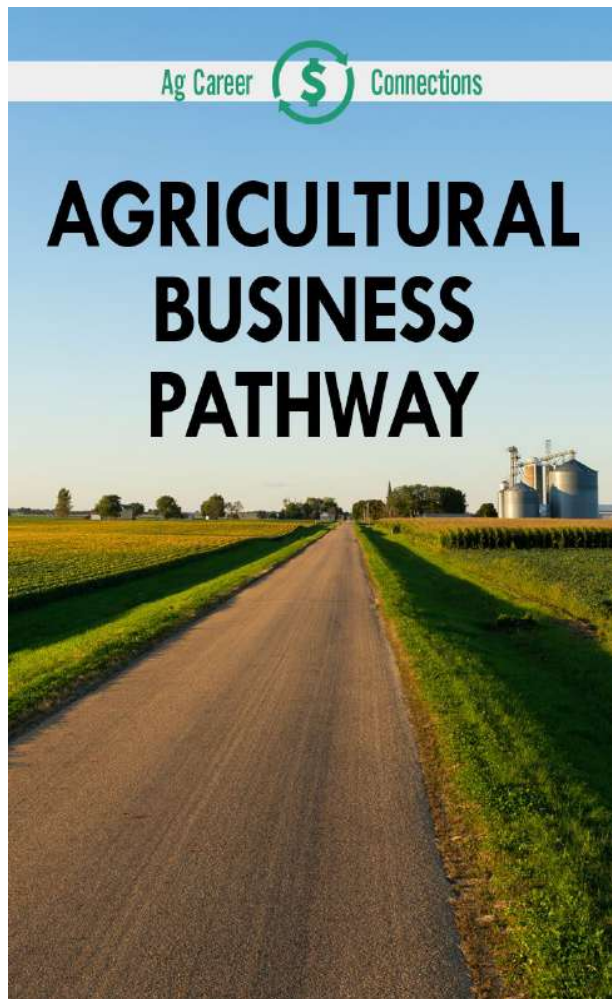
The following high school courses are recommended: agricultural education, mathematics/economics, biology, chemistry, botany.

### Typical Employers:

Commodity supply companies, seed production companies, chemical/fertilizer distributors, animal processing and health companies, equipment dealerships, there are also some opportunities to be self-employed.

Salary Range: \$21,000 - \$103,000  
Average Salary: \$60,712





## Cooperative Extension Educator/Agent

Extension Educators/Agents are employed by land-grant universities and serve the citizens of that particular state by serving as an expert or teacher on a topic relating to economics, community development, agriculture, family, animal production, diet and nutrition; working with 4-H.

### What education and training is required?

This can vary depending on the level of role as well as your area of expertise. Primarily a bachelor's or master's degree are required in either your subject area or agriculture and extension education. Those doing research and teaching at the university level may have a doctorate.

### To pursue a career as an Extension Agent

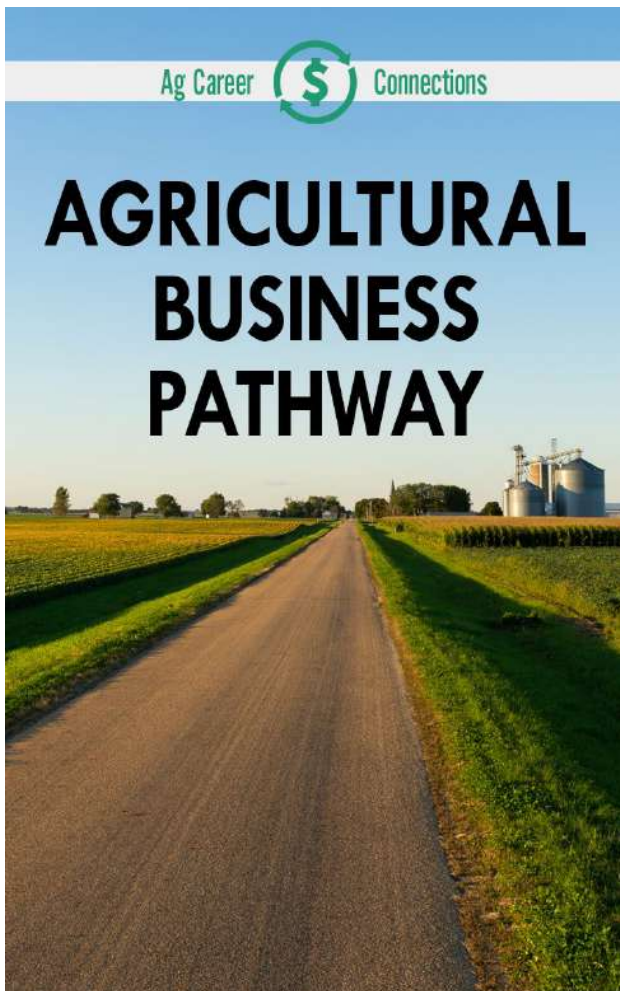
The following high school courses are recommended depending upon area of interest: agricultural education, family and consumer sciences, public speaking, writing, sciences, personal finance, and business.

### Where can I work?

Extension educators/agents are typically employed by state or county agencies.

Salary Range: \$37,490 - \$68,463

Average Salary: \$50,663



## Agriculture Education Teachers

An Agricultural Science Teacher is responsible for the education of agriculture, food science, and natural resources for students. Using these topics, agricultural science teachers can give students vital skills that are important in the ag industry. These skills include: math, science, leadership, technology, communications, and management. They can also provide strong agricultural education by advising their schools FFA Chapter.

### What education and training is required?

Bachelor's degree in agricultural education or other agricultural related field when coupled with appropriate state teaching licensure.

### To pursue a career as an Agricultural Science Teacher:

The following high school courses are recommended: agricultural education, science and mathematics.

### Typical Employers:

Middle and High Schools

Salary Range: \$15,500 - \$54,000

Average Salary: \$32,927





# AGRICULTURAL BUSINESS PATHWAY



## Financial Analyst

A financial analyst looks at various parts of a company's finances in order to help them make better financial decisions.

### What education and training is required?

A bachelor's degree or higher in agricultural business, accounting or finance.

### To pursue a career as a financial analyst:

The following high school courses are recommended: agricultural education, mathematics, English, business courses and statistics.

### Where can I work?

Financial analysts can work in all aspects of agricultural companies to help them understand their finances and make decisions regarding those finances.

Salary Range: \$31,000 - \$108,000

Average Salary: \$68,935



# AGRICULTURAL BUSINESS PATHWAY



## Budget Analyst

Budget Analysts are responsible for ensuring that the company profits and other resources are being used in the most adequate way possible. They study the company's budget to find ways to be more efficient and generate more profits.

### What education and training is required?

A bachelor's degree in accounting, finance, business, economics or related field is required to be a budget analyst.

### To pursue a career as a budget analyst:

The following high school courses are recommended: agricultural education, mathematics, English, business courses and statistics.

### Where can I work?

Budget analysts work for companies and organizations both large and small.

Salary Range: \$36,000 - \$135,000

Average Salary: \$83,568



# AGRICULTURAL BUSINESS PATHWAY



## Accountant

Accountants help in the preparation and examination of financial records. They also play a major role in ensuring taxes are paid and accurate financial records are kept.

### What education and training is required?

Any degree level can help you land a job in accounting, but a more advanced degree offers more opportunities and better compensation. An MBA (Master of Business Administration) would be most beneficial. Most employers also request that their hires hold the title of Certified Public Accountant (CPA), which is licensed by each state. An understanding of commodity markets and trading would also be valuable in an agricultural setting.

### To pursue a career as an accountant:

The following high school courses are recommended: agricultural education, accounting, business courses, economics, government, and computer courses.

### Where can I work?

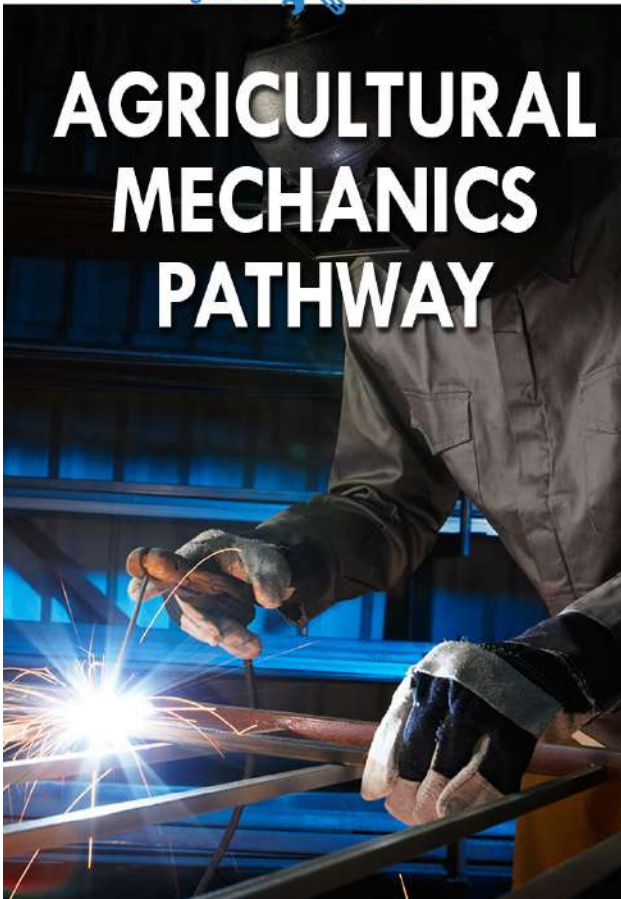
Accountants can be self-employed, or they may work for a company or an accounting firm. Government agencies would also hire accountants to examine their records and to audit businesses and individuals.

Salary Range: \$25,000 - \$85,500

Average Salary \$57,485



# AGRICULTURAL MECHANICS PATHWAY



## Design Engineer

A Design Engineer designs and develops agricultural equipment and system products and serves as a technical resource by participating in design reviews and providing input of new projects.

### What education and training is required?

A bachelor's degree in agricultural or mechanical engineering is required. Knowledge in machining, steel fabrication, and welding are also essential.

### To pursue a career as a Design Engineer:

The following high school courses are recommended: agricultural education, agricultural mechanics, industrial technology, welding, computer courses, and advanced mathematics.

### Typical Employers:

Design engineers most often work for agricultural equipment and systems manufacturers.

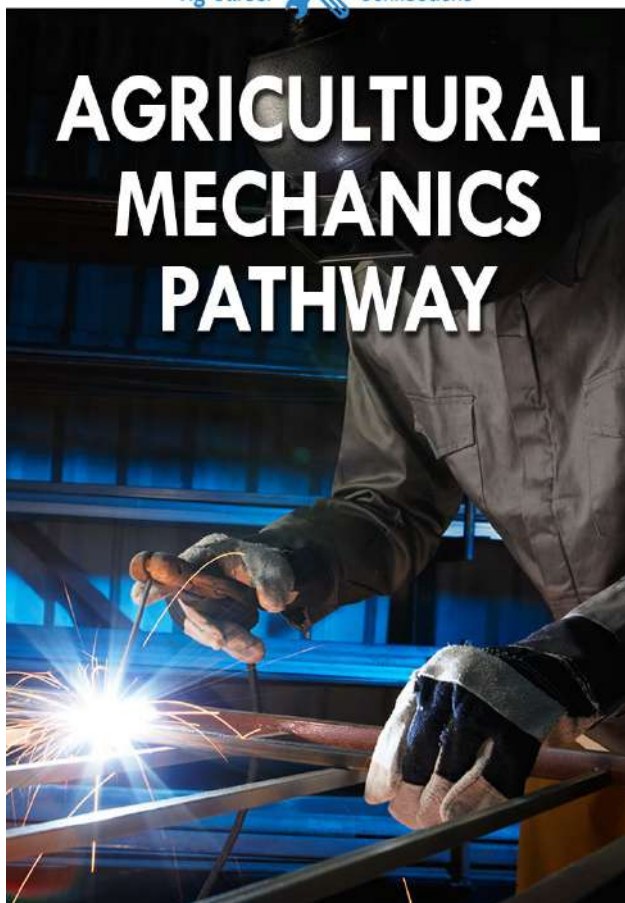
Salary Range: \$49,500 - \$124,000

Average Salary: \$83,641





# AGRICULTURAL MECHANICS PATHWAY



## Automation Coordinator/ Technician

Automation technicians are responsible for the installation, operation and maintenance of computer/robotic systems used in a variety of agricultural sectors.

### What education and training is required?

A bachelor's degree in electrical engineering, electronics technology, bio-engineering, biological sciences or computer science is a minimum requirement of employers. There are also industry certifications you can obtain.

### To pursue a career as an automation technician:

The following high school courses are recommended: agricultural education, computer courses, mathematics and physics.

### Where can I work?

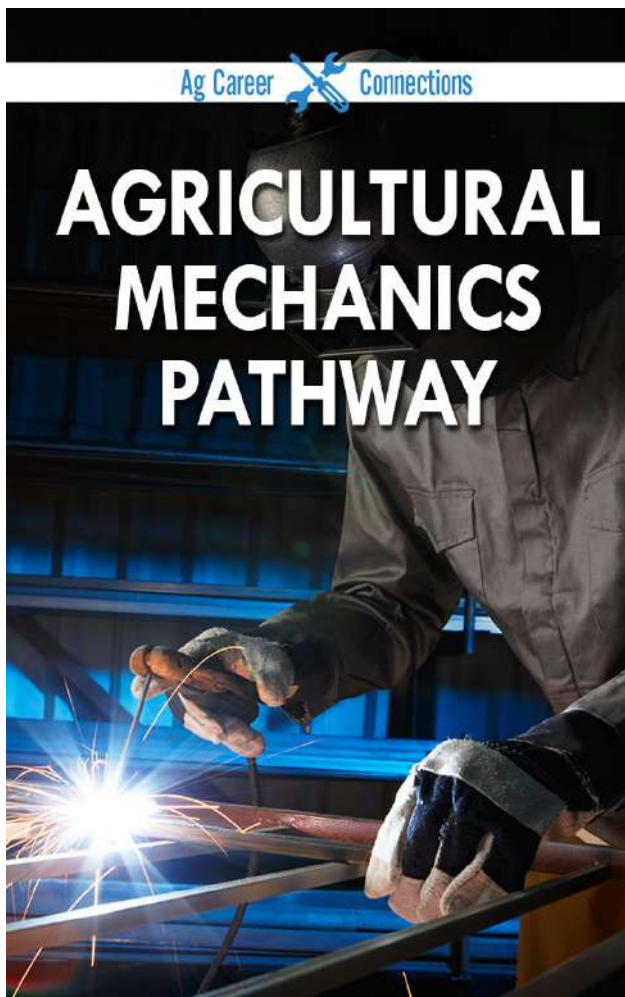
Automation technicians can work in a variety of factories and plants because most of today's technology includes automation. In food packaging and processing plants automation may help with sizing, weighing etc. Companies who rely heavily on computer data processing software may also employ automation technicians.

Salary Range: \$65,124 - \$125,381

Average Salary: \$90,362



# AGRICULTURAL MECHANICS PATHWAY



## Service Manager

A service manager is responsible for the general management of the service department (including service technicians) as they perform basic diagnosis and repairs on diesel engines, transmissions, agricultural implements and lawn and garden equipment. Service managers perform quality control and ensure service tickets (orders from customers for repairs or service on equipment) are delegated to the right team member based on skill level and knowledge.

### What education and training is required?

A high school diploma, or more preferably an associate degree in industrial equipment technologies, mechanics, heavy equipment or transportation technology, is required. On the job training is also required.

### To pursue a career as an Accounting Manager:

The following high school courses are recommended: agricultural education, agricultural mechanics, welding, small engine repair, business, accounting, personal finance and statistics.

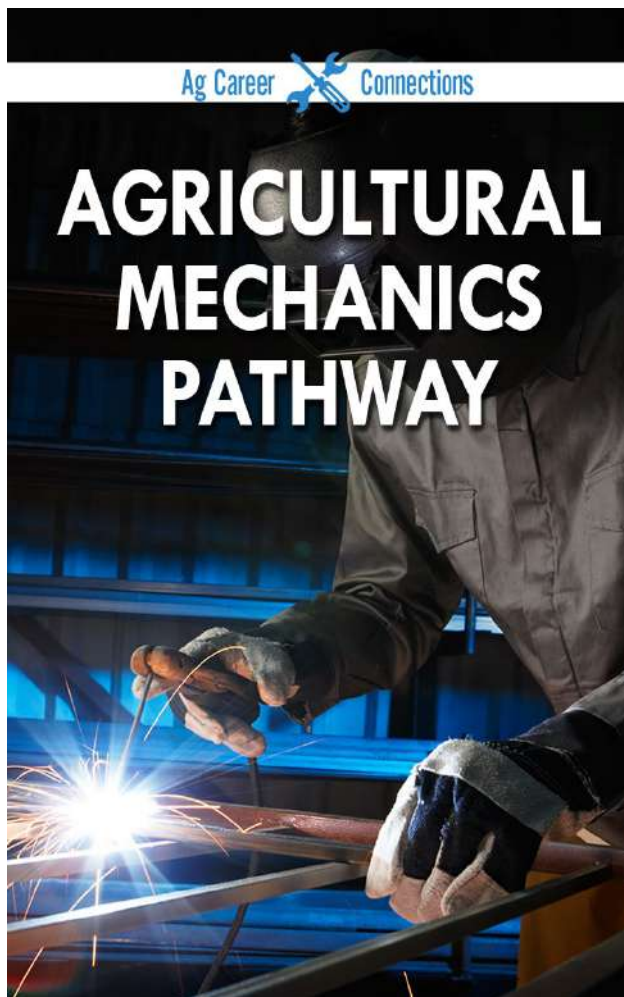
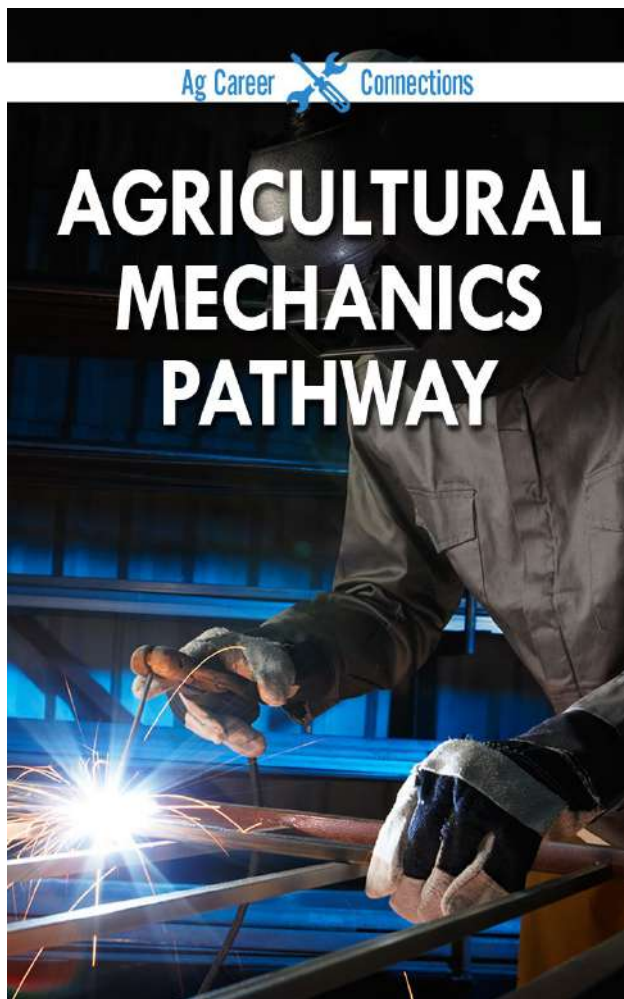
### Where can I work?

Employers may include farm equipment dealers and manufacturers.

Salary Range: \$42,183 - \$117,101

Average Salary: \$70,283





## Electrical Engineer

Electrical Engineers use technology to install, repair, service, and create electrical operations.

### What education and training is required?

A bachelor's degree in electrical, industrial, mechanical or agricultural engineering is required.

### To pursue a career as an Electrical Engineer:

The following high school courses are recommended: agricultural education, a focus on physical science, and mathematics.

### Where can I work?

Typical employers: employed by farm equipment manufacturers, grain milling operations, research firms, meat processing companies, as well as some state and government agencies.

Salary Range: \$65,684 - \$137,241

Average Salary: \$94,945



## Assembly Technician

Assembly technicians assemble parts to the main machine or agricultural equipment while maintaining quality workmanship.

### What education and training is required?

A high school diploma is required but an associate's degree in a power technology field (automotive, agricultural power, diesel, etc.) is much preferred.

### To pursue a career as an Assembly Technician:

The following high school courses are recommended: agricultural education, agricultural mechanics, industrial technology, welding, and mathematics.

### Typical Employers:

Assembly technicians are most frequently found in agricultural equipment or system factories or production plants.

Salary Range: \$25,000 - \$55,500

Average Salary: \$39,445





# ANIMAL SCIENCE PATHWAY



## Herdsman

A herdsman typically manages the day-to-day farm operations for the farm/ranch owner. Many times a herdsman will live on the property to be close to the animals at all times of the day.

### What education and training is required?

An associate's or bachelor's degree in animal science or a livestock related field. Experience working with livestock is also needed.

### To pursue a career as an herdsman:

The following high school courses are recommended: agricultural education, mathematics, animal science, anatomy, biology and chemistry.

### Where can I work?

Herdsman are needed on large-scale ranches and farms some may be with independent producers and others may work for corporate animal production companies.

Salary Range: \$31,419 - \$61,117

Average Salary: \$43,820



# ANIMAL SCIENCE PATHWAY



## Horse Trainer/Instructor

A horse trainer or instructor works with horses to ready them for riders, races or shows. They also train riders to learn how to ride and work with their horses.

### What education and training is required?

An associate's degree in equine science or equine studies is typically required to become a horse trainer. You may look into additional courses, workshops or apprenticeships to become more familiar with training horses.

### To pursue a career as a Horse Trainer / Instructor:

The following high school courses are recommended: agricultural education, biology, animal science, and mathematics.

### Where can I work?

A horse trainer may work for public or private stables or horse breeders, rodeo companies, large ranches, or you may be self-employed.

Salary Range: \$30,754 - \$55,845

Average Salary: \$41,442



# ANIMAL SCIENCE PATHWAY



## Swine Farm Manager

A swine farm manager oversees all aspects of a swine farm where adult female hogs are housed to birth piglets and where those piglets remain for the first four weeks of their life. They must be able to have both people management and animal care skills.

### What education and training is required?

An associates or bachelor's degree in any livestock animal agriculture related field.

### To pursue a career as a sow farm manager:

The following high school courses are recommended: agricultural education, mathematics, animal science, biology and chemistry.

### Where can I work?

Swine Farm Managers may work for an independent farmer or for a company who owns or contracts the farm.

Salary Range: \$34,070 - \$95,832

Average Salary: \$57,140



# ANIMAL SCIENCE PATHWAY



## Food Animal Veterinarian

Food Animal Veterinarians are responsible for the care of animals that are raised for food production and human consumption. They provide medical care consisting of research, diagnoses, and prevention.

### What education and training is required?

A doctorate of Veterinary Medicine is required. A bachelor's degree in animal science, biology, chemistry, animal nutrition, zoology or other related majors is required before being accepted to a doctoral program.

### To pursue a career as a Veterinarian:

The following high school courses are recommended: agricultural education, a focus on sciences such as animal science and biology, chemistry, physical science, and mathematics.

### Typical Employers:

Employed by food production companies, governmental agencies, and some university research farms.

Salary Range: \$82,630 - \$185,387

Average Salary: \$113,768





# ANIMAL SCIENCE PATHWAY



## Pet Groomer

A pet groomer or pet stylist professionally grooms dogs, cats, and other pets. A horse groom specializes in grooming, tacking, and bathing horses.

### What education and training is required?

A high school diploma is required to become a pet groomer along with a certain level of experience, typically as an apprentice or trainee. There are also pet grooming programs available. Breed-standard clipping knowledge is preferred.

### To pursue a career as a Pet Groomer:

The following high school courses are recommended: agricultural education, animal science, anatomy, and biology.

### Typical Employers:

Pet groomers work for pet salons, pet stores, veterinarians, kennels, or are self-employed. Horse grooms work for stables or may be self-employed.

Salary Range: \$28,368 - \$95,821

Average Salary: \$52,1378



# ANIMAL SCIENCE PATHWAY



## Small Animal Veterinarian

A small animal veterinarian is responsible for the diagnosis and treatment of sickness, disease and injury in companion animals like dogs, cats, rabbits, caged birds, and other small pets.

### What education and training is required?

A Doctor of Veterinary Medicine (DVM) is required to become a small animal veterinarian. You may also consider receiving special certifications for therapy, ophthalmology, anesthesiology, neurology, or critical care.

### To pursue a career as a Small Animal Veterinarian:

The following high school courses are recommended: agricultural education, animal science, biology, chemistry, computer courses, and mathematics.

### Where can I work?

Small animal veterinarians may be self-employed or work for clinics, animal hospitals, laboratories, or animal health companies.

Salary Range: \$82,630 - \$185,387

Average Salary: \$123,768





# ENVIRONMENTAL SCIENCE PATHWAY



## Environmental Scientist & Specialist

Environmental Scientist and Specialist provide the means to comply with company programs and regulatory requirements through land and nutrient management facilities.

### What education and training is required?

A bachelor's degree in biology or a related field, such as horticulture, chemistry or environmental science is required for some entry level positions. Positions that are research or specialty focused require a master's or doctorate degree.

### To pursue a career as an Environmental Scientist & Specialist:

The following high school courses are recommended: agricultural education, a focus on science, earth science, biology, botany, chemistry, and mathematics.

### Typical Employers:

Employed by research firms, governmental organizations, schools/universities and environmental organizations.

Salary Range: \$47,792 - \$122,184

Average Salary: \$76,416



# ENVIRONMENTAL SCIENCE PATHWAY



## Environmental Engineer

An Environmental engineer is responsible for researching problems within the environment and creating solutions for areas like water and air pollution and waste management.

### What education and training is required?

A bachelor's degree in agricultural, civil, environmental, or chemical engineering is required.

### To pursue a career as an Environmental Engineer:

The following high school courses are recommended: agricultural education, a focus on science, earth science, biology, botany, chemistry, biology, and mathematics.

### Typical Employers:

Employed by plant research companies, food science companies, governmental organizations, schools/universities, and environmental organizations.

Salary Range: \$59,132 - \$125,300

Average Salary: \$86,077







# ENVIRONMENTAL SCIENCE PATHWAY



## Marine Biologist

Marine biologists study aquatic organisms and their habitats.

### What education and training is required?

A minimum of a bachelor's degree in marine biology or a closely related field is required to become a marine biologist. A master's degree is often preferred, however.

### To pursue a career as a Marine Biologist:

The following high school courses are recommended: agricultural education, biology, earth science, and mathematics.

### Where can I work?

Aquaculture production farms, government agencies, universities, zoos, aquariums, and research firms employ marine biologists.

Salary Range: \$35,263 - \$65,913

Average Salary: \$48,211



# ENVIRONMENTAL SCIENCE PATHWAY



## Sanitation Supervisor

Sanitation supervisory are responsible for all activities involved in maintaining the cleanliness of their assigned production area. Sanitation is a critical role in a well-developed food safety program and the coordinator will also have an active role in preventing unsanitary situations in the workplace.

### What education and training is required?

A high school diploma is required and an associate's degree in business operations, food safety, or agricultural business is preferred.

### To pursue a career as a sanitation coordinator:

The following high school courses are recommended: agricultural education, animal science, mathematics, Spanish, biology and chemistry.

### Where can I work?

Sanitation coordinators work in food processing facilities including grain, vegetables, meat, dairy and dry packaged goods.

Salary Range: \$52,425 - \$83,494

Average Salary: \$66,160





# ENVIRONMENTAL SCIENCE PATHWAY



## Water Treatment Technician

Water Treatment Technicians perform daily monitoring of agricultural plant functions, which includes accessing the daily demands and making appropriate adjustments to meet those demands.

### What education and training is required?

An associate's degree in agriculture, environmental science, or natural resources is required to become a water treatment technician. Technicians must also be certified with a Wastewater Operator Certification.

### To pursue a career as a Water Treatment Technician:

The following high school courses are recommended: agricultural education, biology, physics, chemistry, natural resources, English and mathematics.

### Where can I work?

Water Treatment Technicians can work for a range of agricultural companies, processing plants, chemical plants, large animal production farms, grain elevators, or government agencies.

Salary Range: \$48,389 - \$113,367

Average Salary: \$74,065



# ENVIRONMENTAL SCIENCE PATHWAY



## Pest Control Advisers

Pest control advisers are responsible for scouting crops and identifying pests that can affect a farmer's harvest. Based on their observations they then make recommendations on treatment and suggest products or other methods to control or prevent problems.

### What education and training is required?

A bachelor's degree in agricultural related program such as agronomy or entomology.

### To pursue a career as a pest control adviser:

The following high school courses are recommended: agricultural education, a focus on sciences such as chemistry and biology, and mathematics.

### Where can I work?

Pest control advisers may work independently and are hired on a contractual basis. Some advisers especially in the vegetable industry may be employed by large grower operations. Chemical companies also have advisers who work for them and suggest the right solution that they manufacture.

Salary Range: \$34,137 - \$64,222

Average Salary: \$46,822







# ENVIRONMENTAL SCIENCE PATHWAY



## Wildlife Biologist

A wildlife biologist, or a fisheries biologist, studies and oversees the protection and management of an assigned population of one or several species of animals.

### What education and training is required?

A bachelor's or master's degree in wildlife biology, biology, ecology, environmental science, natural resources, wildlife management, wildlife sciences, or a related area.

### To pursue a career as a Wildlife Biologist:

The following high school courses are recommended: agricultural education, natural resources, biology, animal science, computer courses, and mathematics.

### Typical Employers:

Wildlife biologists most often work for government agencies, but they may also work for conservation groups and environmental organizations as well as preserves, state and national parks, and zoos.

Salary Range: \$34,2689 - \$102,847

Average Salary: \$59,367



# FOOD SCIENCE PATHWAY



## Food Production Supervisor

Food Production Supervisors oversee either entire assembly lines or one entity. They are held accountable for the production of outputs and operating activities for food products. Food Production Supervisors also are always striving to meet their goals to obtain maximum efficiency at a low cost within specified standards.

### What education and training is required?

A bachelor's degree in Food Science, Food Engineering, Business or Industrial Engineer.

### To pursue a career as a Food Production Supervisor:

The following high school courses are recommended: agricultural education, biology, chemistry and mathematics.

### Typical Employers:

Typical employers include food production and food ingredient companies.

Salary Range: \$35,323 - \$92,257

Average Salary: \$57,086



# FOOD SCIENCE PATHWAY



## Quality Control Technician

Quality control technicians ensure that processed and manufactured food products are produced safely and follow quality standards. They perform day-to-day quality control activities such as internal audits, recommend corrective actions, perform checks on production lines and test in-progress products in the laboratory.

### What education and training is required?

An associate's or bachelor's degree in agricultural science, biology, microbiology, food science, chemistry or a related degree is needed to become a quality control technician. Food safety certifications may be needed for specialization to implement certain food safety regulations.

### To pursue a career as a Quality Control Technician:

The following high school courses are recommended: agricultural education, mathematics, chemistry, biology, family and consumer sciences.

### Where can I work?

Government inspection agencies, and food production, chemical, seed, medical, health companies and a variety of agricultural laboratory settings employ quality control technicians.

Salary Range: \$36,009 - \$62,757

Average Salary: \$47,538



# FOOD SCIENCE PATHWAY



## Food Technologist

Food technologists oversee all aspects of product development, reviewing and approving nutritional data, writing product specifications and enforcing USDA labeling regulations on new and modified food products.

### What education and training is required?

A bachelor's degree or master's degree in food science or in a related field.

### To pursue a career as a food technologist:

The following high school courses are recommended: agricultural education, computer courses, mathematics, biology and family and consumer sciences.

### Where can I work?

Food technologists work for food companies who market and develop food products.

Salary Range: \$33,599 - \$69,664

Average Salary: \$48,380





# FOOD SCIENCE PATHWAY



## Laboratory Manager

Laboratory managers manage the day-to-day laboratory operations for all tasks in a lab. They uphold health and safety standards, improve lab operation processes and mentor and train lab technicians on the correct use of lab equipment. Lab managers also undertake administrative duties for the lab such as ordering supplies, scheduling employees and communicating with outside lab services.

### What education and training is required?

A bachelor's degree in laboratory science, agricultural science, biology, chemistry or a field related to the type of research occurring in the lab (e.g. plant science, animal science, etc.) is required. Some laboratories may require a master's or doctoral degree in a related field with general experience working in a lab to take on this manager position.

### To pursue a career as a Laboratory Manager :

The following high school courses are recommended: agricultural education, anatomy, biology, mathematics, statistics, chemistry and physics.

### Where can I work?

Lab managers can work in any industry where research is carried out in a lab. Technicians can work in academic, government or company setting. Seed, chemical, crop, food, biotech and animal health companies are examples of companies that hire laboratory managers.

Salary Range: \$58,931 - \$126,894  
Average Salary: \$86,475



# FOOD SCIENCE PATHWAY



## Nutritionist / Dietician

Nutritionist/Dietitians are the point of contact for individuals that want to be advised on eating programs, healthy food selection, and the alteration of diets to achieve their nutrition and diet needs.

### What education and training is required?

A bachelor's degree in Dietetics, Food Science, or Nutrition.

### To pursue a career as a Nutritionist/Dietitian:

The following high school courses are recommended: agricultural education, family and consumer sciences, chemistry and mathematics.

### Typical Employers:

Typical employers include food production, food ingredient companies, restaurants, school, community and government groups.

Salary Range: \$24,893 - \$93,770  
Average Salary: \$48,314



# FOOD SCIENCE PATHWAY



## Product Development Food Scientist

Product Development Food Scientists research and revamp the process of canning, freezing, storing, and packaging of food.

### What education and training is required?

A master's or bachelor's degree in Food Science, Nutrition, Food Engineering.

### To pursue a career in Food Scientist:

The following high school courses are recommended: agricultural education, biology, chemistry and mathematics.

### Typical Employers:

Typical employers include food production companies, government inspection agencies, colleges and universities.

Salary Range: \$35,305 - \$77,071

Average Salary: \$52,163



# FOOD SCIENCE PATHWAY



## Scheduler

A scheduler is responsible for planning, coordinating and organizing the production schedules for manufacturing and processing facilities. Schedulers make their production schedules based on forecasted product demands, available supplies, labor availability and machine capacities. They communicate heavily with purchasing, operations, shipping and customer service departments so they can handle unforeseen problems as they arise.

### What education and training is required?

An associate or bachelor's degree in supply chain management, agribusiness, logistics, production planning or engineering is required to be a scheduler.

### To pursue a career as a Scheduler :

The following high school courses are recommended: agricultural education, business, computer skills, personal finance and mathematics.

### Where can I work?

Schedulers work across industries including agricultural, animal production, seed and chemical production, food, transportation and anywhere products are manufactured.

Salary Range: \$28,803 - \$115,469

Average Salary: \$57,670





# FOOD SCIENCE PATHWAY



## Storage and Hygiene Coordinator

Storage and hygiene coordinators implement the scheduling and treatment or fumigation of grain and other products.

### What education and training is required?

A high school diploma is required, but further education, such as an associates degree or training in pest control is preferred.

### To pursue a career as a storage and hygiene coordinator:

The following high school courses are recommended: agricultural education, biology, mathematics, business courses and computer courses.

### Where can I work?

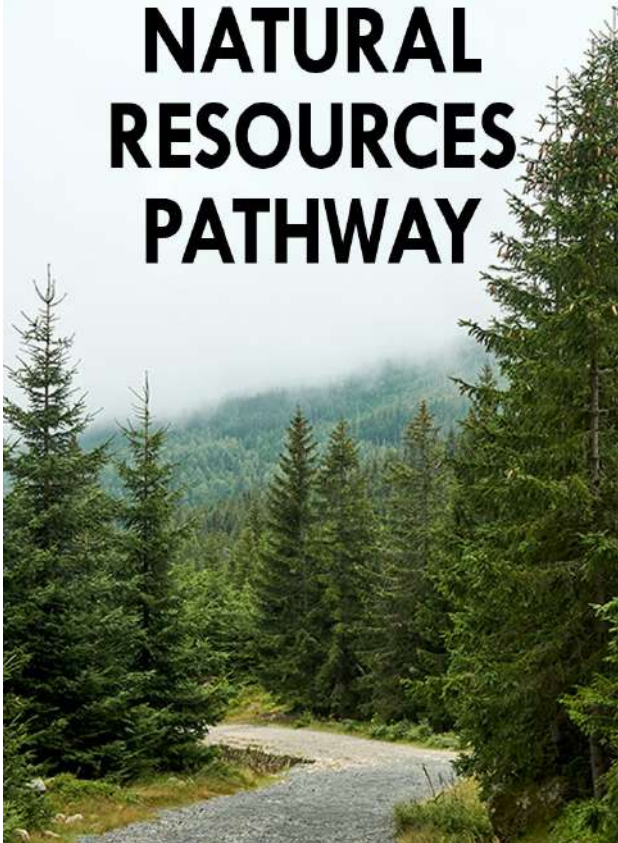
You can work for a grain facility, exporter or other facility where food or food related goods are stored.

Salary Range: \$61,077 - \$105,831

Average Salary: \$80,398



# NATURAL RESOURCES PATHWAY



## Forester

A forester is a professional in charge of caring for, planting and managing trees or forests. They are involved in a range of activities including restoration, conservation, timber harvest, and managing protected wooded areas.

### What education and training is required?

The majority of Forester roles require bachelor's degree in forest management, natural resources, fisheries, wildlife, and conservation or a related field.

### To pursue a career as a Forester:

The following high school courses are recommended: agricultural education, biology, horticulture, mathematics, natural resources, and computer courses.

### Where can I work?

Foresters work for timber companies as well as state parks and government agencies. Some are self-employed.

Salary Range: \$23,391 - \$67,421

Average Salary: \$39,712



# NATURAL RESOURCES PATHWAY



## Aquaculture Hatchery Manager

Hatchery Managers oversee all aspects of an aquaculture hatchery including the management of personnel, fish, infrastructure and equipment.

### What education and training is required?

Hatchery managers typically have a bachelor's degree in fisheries science, aquaculture, hatchery management or hatchery maintenance.

### To pursue a career as a hatchery manager:

The following high school courses are recommended: agricultural education, animal science, mathematics, English, biology, chemistry, wildlife biology and environmental sciences.

### Where can I work?

Aquaculture hatchery managers are employed by large commercial fisheries who produce and harvest fish. They may also be employed by state and government environmental agencies.

Salary Range: \$35,966 - \$64,828

Average Salary: \$48,287



# NATURAL RESOURCES PATHWAY



## Geologist

A geologist studies the earth's crust, minerals, rocks, precious metals and gems, and fossils.

### What education and training is required?

A bachelor's degree in geology, geosciences, geophysics or a related field is required, but a master's or doctorate degree is often preferred.

### To pursue a career as a Geologist:

The following high school courses are recommended: agricultural education, chemistry, physics, earth science, biology, natural resources, advanced mathematics, and computer courses.

### Where can I work?

Geologists work for research firms, environmental businesses, government agencies and universities.

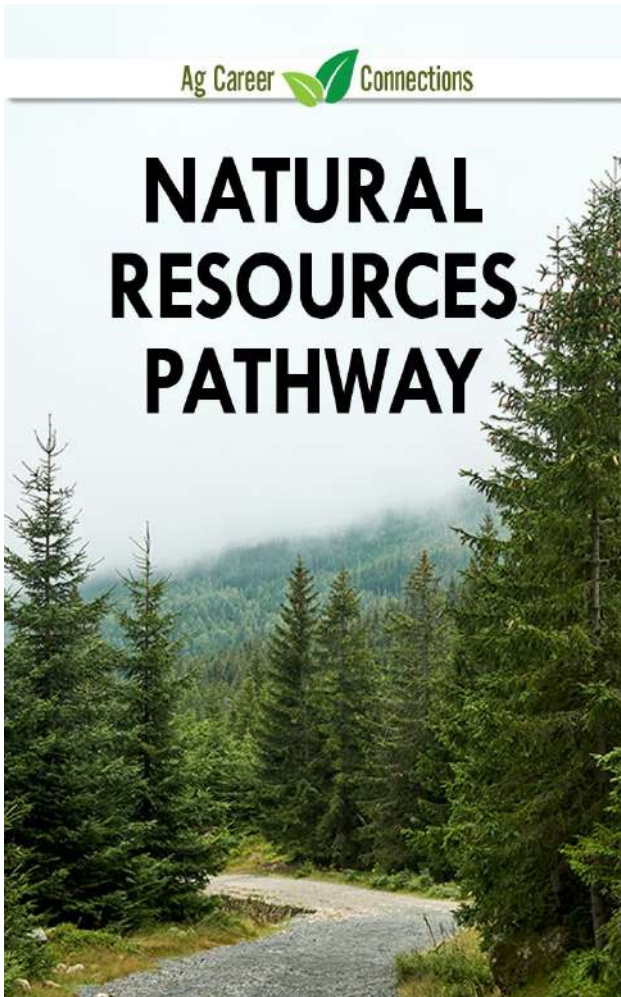
Salary Range: \$39,107 - \$105,647

Average Salary: \$64,277





# NATURAL RESOURCES PATHWAY



## Logger

Loggers, lumberjacks, or timber fallers work in the timber industry, cutting down trees and processing them into logs.

### What education and training is required?

A high school diploma is required to become a logger.

### To pursue a career as a Logger:

The following high school courses are recommended: agricultural education, mathematics, natural resources, and computer courses.

### Where can I work? How much money will I make?

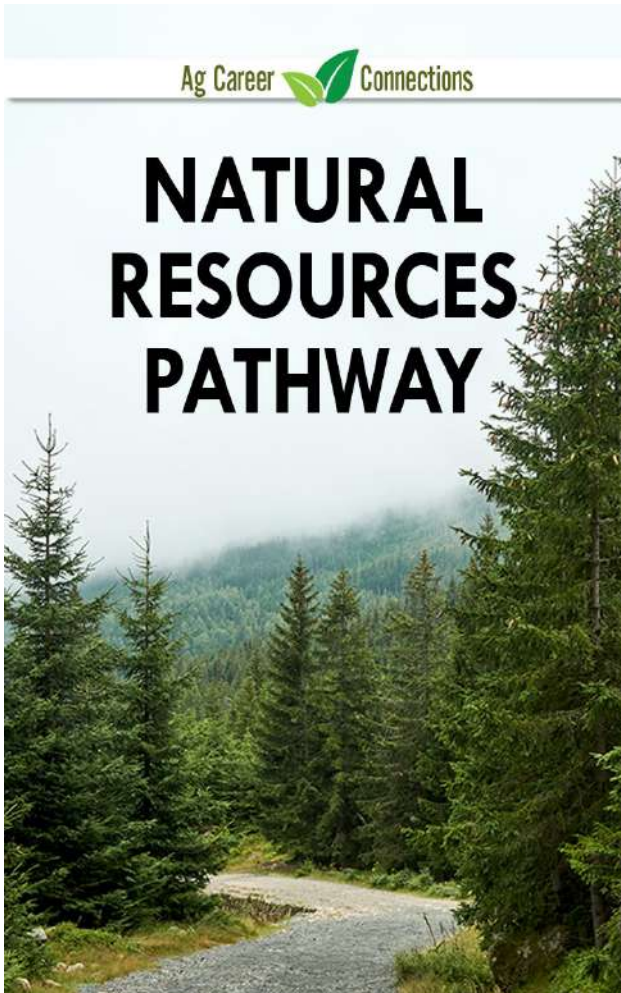
Most loggers work for lumber or timber companies or state or national forest associations or groups.

Salary Range: \$20,532 - \$50,431

Average Salary: \$32,178



# NATURAL RESOURCES PATHWAY



## Irrigation Specialist

Irrigation specialist are responsible for the sales, programming, operating and maintenance or irrigation systems to help producers, produce a more beautiful crop.

### What education and training is required?

A high school diploma is required and an associates or higher, degree in turf grass management, ag engineering or landscape architecture could be beneficial depending on the type of job you are pursuing.

### To pursue a career as an irrigation specialist:

The following high school courses are recommended: agricultural education, biology, business, and Spanish.

### Where can I work?

Irrigation specialist can work for landscaping companies, produce companies, golf courses, or irrigation system companies in sales, marketing, technical support, product development etc.

Salary Range: \$35,986 - \$68,681

Average Salary: \$49,715



# NATURAL RESOURCES PATHWAY



## Water Resource Engineer

A water resource engineer is responsible for undertaking and leading a range of hydrology and hydraulics projects for controlling water as it pertains to irrigation, waste development and flood mitigation. They will assess how and the best ways to control water by performing engineering analyses, field assessments and creating water flow designs. Water resource engineers work with clients, agencies and subcontractors from start to completion of a project.

### What education and training is required?

A bachelor's or master's degree in engineering (civil, water or environmental engineering) is required. A certificate in project management would also be beneficial.

### To pursue a career as a Water Resource Engineer:

The following high school courses are recommended: agricultural education, earth science, biology, plant science, chemistry, environmental science, biology, statistics and mathematics.

### Where can I work?

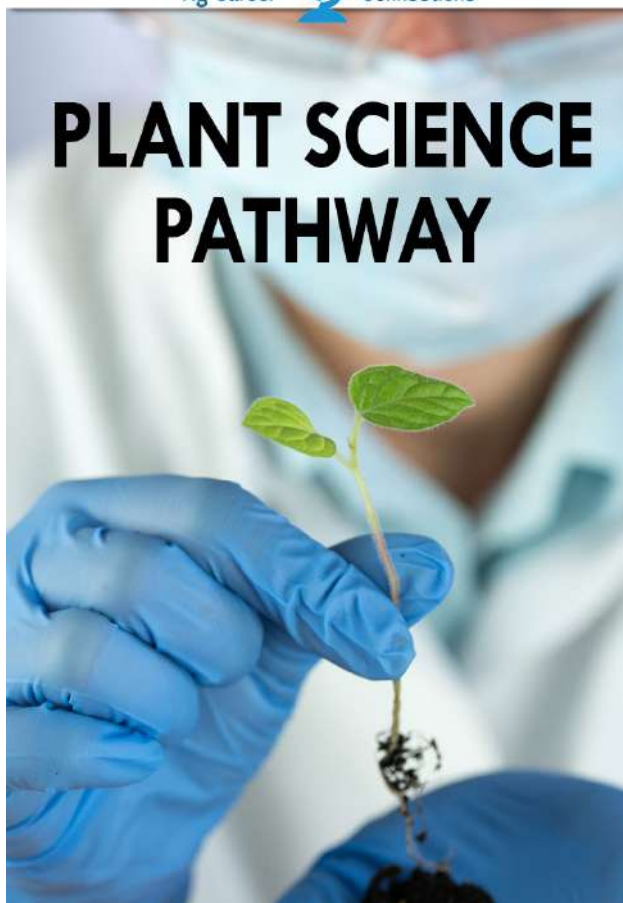
Water resource engineers are typically employed for consulting firms, municipalities, conservation authorities, colleges, universities and government agencies.

Salary Range: \$43,195 - \$130,628

Average Salary: \$75,116



# PLANT SCIENCE PATHWAY



## Agronomist

An agronomist provides agronomic knowledge and leadership to growers in their assigned market while performing job duties such as field scouting, soil management and market analysis.

### What education and training is required?

A bachelor's or master's degree in agronomy or a related field is required to become an agronomist. It is also advised that you receive and maintain your Certified Crop Advisor (CCA) certification.

### To pursue a career as an Agronomist:

The following high school courses are recommended: agricultural education, biology, chemistry, computer courses, and mathematics.

### Where can I work?

Agronomists work for medium to large-scale farms, crop and seed production companies, crop protection companies, government agencies, research firms, environmental organizations, and colleges or universities.

Salary Range: \$49,908 - \$100,244

Average Salary: \$70,732





# PLANT SCIENCE PATHWAY



# PLANT SCIENCE PATHWAY



## Crop Systems Specialist

A crops systems specialist works to improve how a business or company manages and utilizes data of the seed or crop production process.

### What education and training is required?

A bachelor's degree in agricultural engineering, chemical engineering, agribusiness or a closely related field is required.

### To pursue a career as a Crops Systems Specialist:

The following high school courses are recommended: agricultural education, biology, plant science, business and computer courses, and mathematics.

### Where can I work?

Crops systems specialists work for seed and crop production businesses and companies.

Salary Range: \$44,960 - \$86,737

Average Salary: \$62,448



## Florist

Florists are artists; they design and create arrangements of flowers for us to enjoy. Some arrangements are in vases, bouquets, sprays, or larger displays for a party or showcase.

### What education and training is required?

A high school diploma or preferably an associate degree in business management, floral design/plant landscaping.

### To pursue a career as a florist:

The following high school courses are recommended: Agriculture education, biology, horticulture, plant science, art, home economics, and business courses.

### Where can I work?

You can work anywhere geographically. Most florist shops are small businesses. In larger cities you can find shops that specialize in large events or displays.

Salary Range: \$26,456 - \$49,588

Average Salary: \$36,220



# PLANT SCIENCE PATHWAY



## Harvester/Picker

A harvester/picker is responsible for the care and harvesting of produce such as fruits and vegetables on farms. They will harvest produce based on size, weight and ripeness and transfer it to containers or trays for further processing. A harvester/picker may also be responsible for tending to crops, which requires a high degree of care which could include planting, weeding and pruning.

### What education and training is required?

No formal education is required to become a fruit picker.

### To pursue a career as a Harvester/Picker:

The following high school courses are recommended: agricultural education, agricultural mechanics, business, personal finance, plant science, biology and animal science.

### Where can I work?

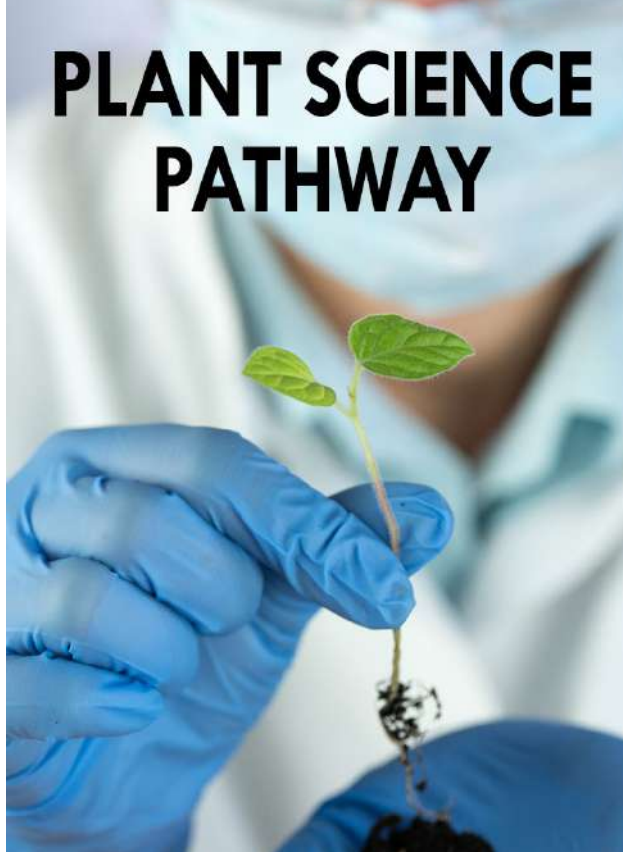
Harvesters/pickers work on farms and for agricultural businesses.

Salary Range: \$24,089 - \$47,267

Average Salary: \$33,744



# PLANT SCIENCE PATHWAY



## Horticulturist

A Horticulturist is responsible for increasing yield, improving vigor, size, and taste of plants. They also coordinate research programs for selective crops. Horticulturists must have extensive knowledge about trees, flowers, vegetables, nuts, bushes, and fruits.

### What education and training is required?

Post-Secondary education is beneficial but not required. An associate's degree or equivalent or six months to one-year related experience and/or training; or equivalent combination of education and experience. Certifications such as a Pesticide Applicator's License are typically preferred.

### To pursue a career as a Horticulturist:

The following high school courses are recommended to prepare for a diploma program: a focus on science (particularly biology/chemistry/botany), mathematics, and computer science are also recommended.

### Typical Employers:

Employed by plant and food production businesses, research firms, homeowners, and municipalities.

Salary Range: \$33,277 - \$65,236

Average Salary: \$46,593





# PLANT SCIENCE PATHWAY



## Landscape Designer

Landscape Designers are responsible for creating, presenting, and overseeing the development of landscapes for individuals and companies. They also provide maintenance services and landscaping designs.

### What education and training is required?

An associates or bachelor's degree in landscape design, horticulture, turf grass, plant science, biology or related field is required.

### To pursue a career as a Landscape Designer:

The following high school courses are recommended to prepare for a diploma program: a focus on science (particularly biology /botany/earth science/geography), mathematics, and business are also recommended.

### Typical Employers:

Employed by greenhouses, nurseries, government agencies, golf courses, athletic venues or universities.

Salary Range: \$39,501 - \$109,459

Average Salary: \$65,755



# PLANT SCIENCE PATHWAY



## Research Associates

Research Associates work under the watch of principal investors and are responsible for correlating, implementing, and documenting research trials and assignments.

### What education and training is required?

A bachelor's or master's degree in a science related field like plant breeding, agronomy, crop science, soil science, biology, or a related field is preferred to become a research associate.

### To pursue a career as a Research Associate:

The following high school courses are recommended: agricultural education, a focus on science, earth science, biology, botany, chemistry, and mathematics.

### Typical Employers:

Employed by seed companies, crop protection companies, research firms, governmental organizations, environmental organizations, and colleges or universities.

Salary Range: \$39,502 - \$100,144

Average Salary: \$62,896



# PLANT SCIENCE PATHWAY



## Row Crop Producer / Farmer

A row crop producer or farmer plants and harvests traditional row crops such as corn, soybeans, wheat, cotton, potatoes, canola, sunflowers, flax, sugar beets, field pea, etc. independently or for a large farm or company.

### What education and training is required?

A high school diploma is required to be a row crop farmer but an associate's or bachelor's degree in a relevant or supplementary field such as agribusiness, plant science, or agriculture is helpful. Certifications such as a CDL or pesticide applicator licenses are also often desired.

### To pursue a career as a Row Crop Producer:

The following high school courses are recommended: agricultural education courses, agricultural mechanics, plant science, biology, business courses, and mathematics.

### Typical Employers:

Row crop producers may work independently on their own farm or they may work for large farms and agricultural companies that produce crops and crop-related products.

Salary Range: \$24,654 - \$57,437

Average Salary: \$37,630



# PLANT SCIENCE PATHWAY



## Analytic Chemist

Analytical chemists study chemical compounds to determine what they are composed of and how they interact with other substances. For this reason, analytical chemists play an important role in looking at chemistry and how it might affect the environment, food, or how medicines may interact with other medicines or the body of an organism.

### What education and training is required?

A bachelor's or master's degree in chemistry, laboratory science or a related field is required to become an analytical chemist.

### To pursue a career as an analytical chemist:

The following high school courses are recommended: agricultural education, biology, chemistry, writing and computer courses.

### Where can I work?

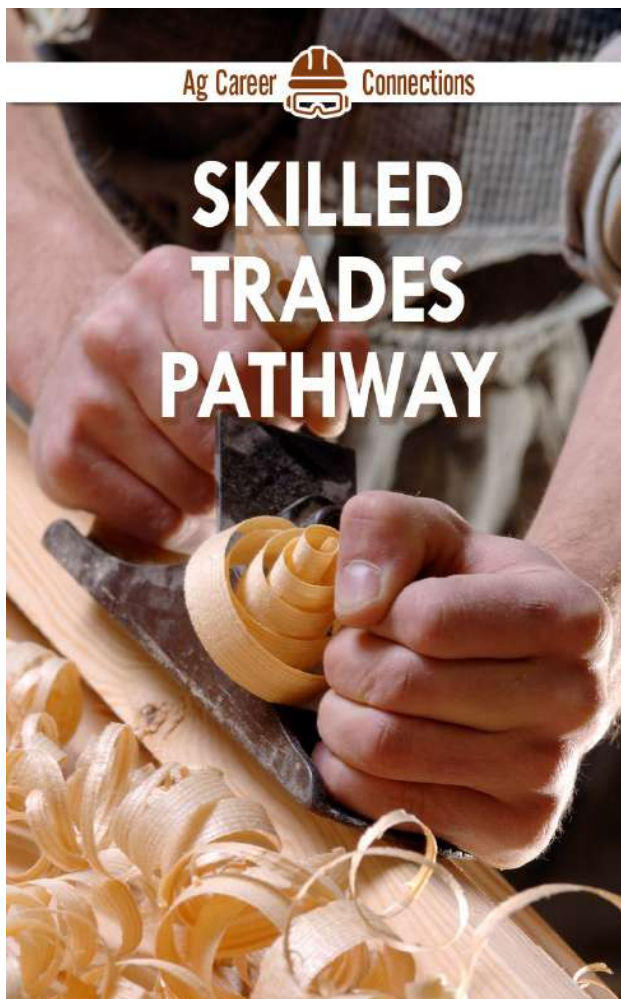
Agriculture companies that develop chemical and pharmaceutical solutions for farmers often hire analytical chemists. You may work in a variety of functions like formulating new herbicides or developing new medicines to treat animals.

Salary Range: \$43,604 - \$97,284

Average Salary: \$65,131







## Carpenter / Laborer

Carpenter/Laborers are responsible for implementing general maintenance, mechanical, and carpentry duties.

### What education and training is required?

A high school diploma with additional certifications depending on area of specialty is required.

### To pursue a career as an Carpenter/Laborer:

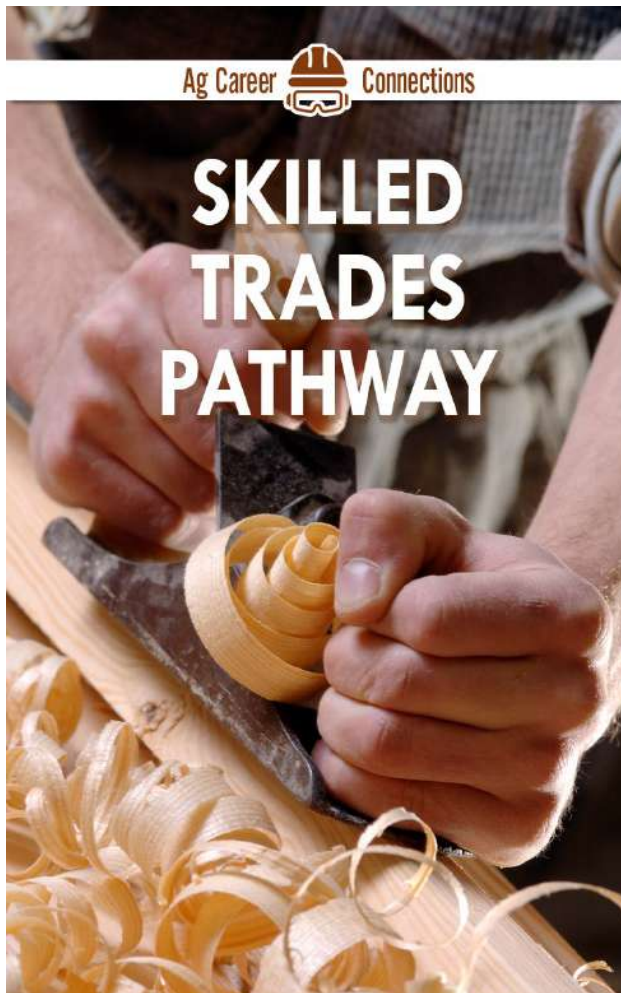
The following high school courses are recommended: agricultural education, a focus on science, and mathematics.

### Typical Employers:

Employed by food processing companies, meat processing companies, research firms, agronomic facilities, as well as environmental agencies.

Salary Range: \$40,112 - \$89,995

Average Salary: \$60,082



## Electrical Technician

Electrician/Electronics Technicians implement wiring and the maintenance for mechanical equipment in electrical systems.

### What education and training is required?

A high school diploma or more preferably an associate's degree in industrial equipment technologies, HVAC Maintenances or electrical/electronic technology is required. With a high school diploma you will need to earn electrical certifications.

### To pursue a career as an Electrician:

The following high school courses are recommended: agricultural education, a focus on science, and mathematics.

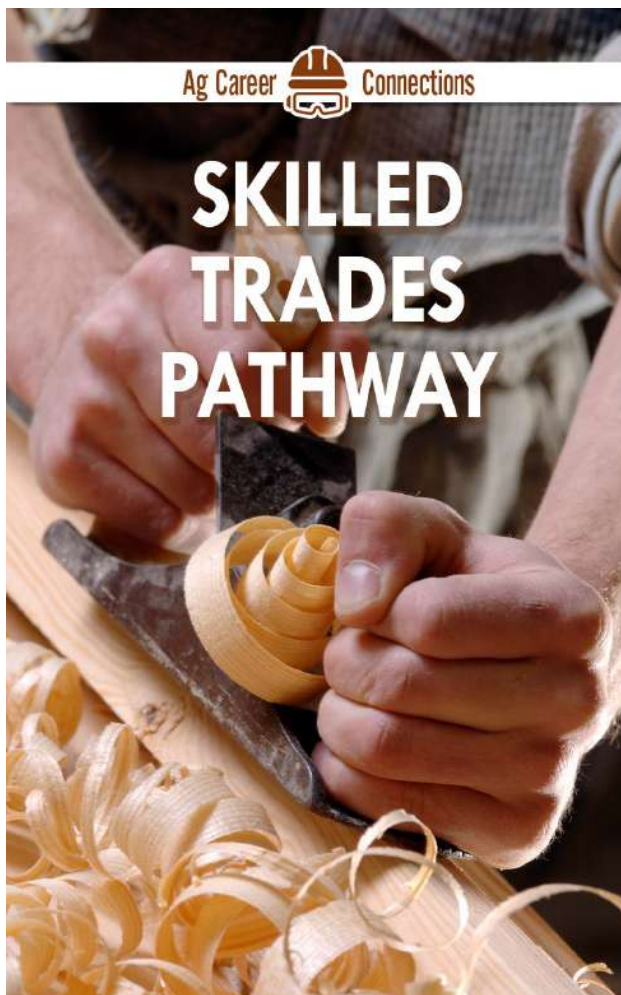
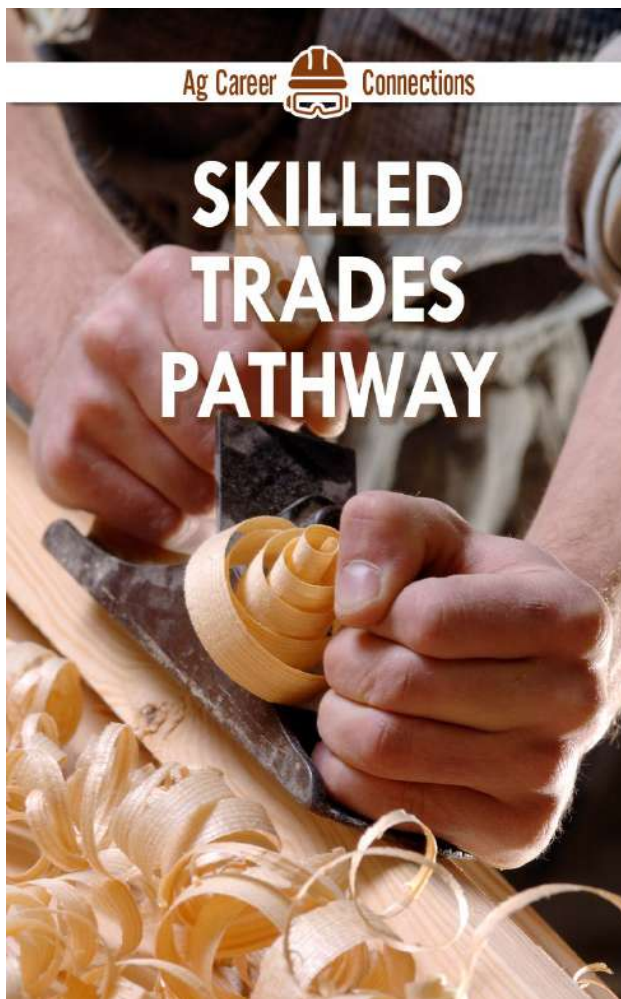
### Where can I work?

Typical employers: employed by farm equipment dealers and manufacturers, grain milling operations, research firms, meat processing companies, as well as some state and government agencies.

Salary Range: \$39,964 - \$84,464

Average Salary: \$58,100





## Forklift Operator

A forklift operator is responsible for the loading and unloading of goods at warehouses and other industrial sites. Using a forklift in a safe manner, they will prepare orders for shipment by transporting materials from storage to shipping docks and vice versa. Additionally, forklift operators will perform daily checks and preventive maintenance to ensure their equipment works properly.

### What education and training is required?

A high school diploma and forklift certification is required to become a forklift operator. Additional certifications may be required depending on type of forklift used.

### To pursue a career as a Forklift Operator:

The following high school courses are recommended: agricultural education, agricultural mechanics, business and mathematics.

### Where can I work?

Forklift operators across industries including agricultural facilities, food productions companies, warehouse facilities and any agricultural businesses or organization that regularly transports and receives goods.

Salary Range: \$31,306 - \$54,431

Average Salary: \$41,280



## Heavy Duty Equipment Technician

A Heavy Duty Equipment Technician inspects, diagnoses, troubleshoots, repairs and verifies the repair of heavy duty equipment such as front-end loaders, dozers, dump trucks and compactors. Repairs include work on multiple systems such as electrical, hydraulics and diesel and use a range of tools. Technicians will test the performance of the repaired equipment and complete service reports.

What education and training is required? Heavy duty equipment technicians require a high school diploma. Many attend vocational schools and community colleges for programs such as diesel technology and heavy equipment mechanics. Some countries, such as Canada, require apprenticeships.

To pursue a career as a Technician: The following high school courses are recommended: agricultural education, agricultural mechanics, mathematics, physics and English.

Where can I work? Heavy duty equipment technicians work in multiple industries such as agriculture, mines, construction, forestry, marine, transportation, natural resources and materials-handling.

Salary Range: \$38,890 - \$87,871

Average Salary: \$58,457





# SKILLED TRADES PATHWAY

## Heavy Equipment Operator

A heavy equipment operator drives and controls agricultural related equipment such as backhoes, digging equipment, tractors and combines. By driving and controlling machinery, they can maintain the quality and production of farms, crops and livestock. Additionally, heavy equipment operators will perform daily checks and preventive maintenance to ensure their equipment works properly.

### What education and training is required?

A high school diploma, valid state driver's license and Commercial Driver's License (CDL) is required to become a heavy equipment operator. Additional certifications may be required depending on the position.

### To pursue a career as a Heavy Equipment Operator :

The following high school courses are recommended: agricultural education, agricultural mechanics, business and mathematics.

### Where can I work?

Heavy equipment operators work on farms that grow crops and raise livestock. They may also work for construction and landscaping companies.

Salary Range: \$35,849 - \$79,742

Average Salary: \$53,467



# SKILLED TRADES PATHWAY

## Mechanic

A mechanic is responsible for maintaining and repairing different kinds of farm equipment such as combines and tractors. They troubleshoot issues and fix them by inspecting engines, mechanical/ electrical components and hydraulic systems. Mechanics ensure that while working they keep their workspaces clean, track their progress and maintain their equipment and tools in good condition.

### What education and training is required?

A high school diploma is required to become a mechanic. However, most employers require advanced training. A vocational or other postsecondary education program in automotive service technology is preferred. Alternatively, one could serve as an apprentice.

### To pursue a career as a Mechanic:

The following high school courses are recommended: agricultural education, agricultural mechanics, science, geometry, physics and related math and science classes.

### Where can I work?

Mechanics work in variety of settings depending on their area of specialization. Mechanics are commonly employed in automotive repair garages, dealerships or are self-employed.

Salary Range: \$37,510 - \$94,189

Average Salary: \$59,439



# SKILLED TRADES PATHWAY

## Truck Driver

A truck driver is the point of contact for receiving, transporting, and delivering products within the ag industry. They ensure that products such as livestock, equipment, and feed are safely delivered to their desired locations.

### What education and training is required?

High School Diploma plus CDL Certification.

### To pursue a career as a Truck Driver:

The following high school courses are recommended: agricultural education, a focus on sciences such as animal science and biology, and mathematics.

### Typical Employers:

Employed by food production companies, grain merchandising companies, chemical companies, co-ops, seed production companies.

Salary Range: \$48,772 - \$145,886

Average Salary: \$84,351



# SKILLED TRADES PATHWAY

## Welder

Welders are responsible for welding equipment and most commonly, machines. They also weld together framework made out of steel for buildings.

### What education and training is required?

A high school diploma and in many cases a welding certification, is required.

### To pursue a career as a Welder:

The following high school courses are recommended: agricultural education, a focus on science, and mathematics.

### Typical Employers:

Employed by farm equipment dealers and manufacturers, seed production companies, cooperatives, feed and grain companies, food production companies.

Salary Range: \$32,738 - \$64,586

Average Salary: \$45,983





# SUSTAINABILITY PATHWAY



## Packaging Engineer

Packaging Engineers design packaging materials for food, animal health care, and other agricultural products such as chemicals, pesticides, and seed.

### What education and training is required?

A bachelor's degree in packing science, engineering, logistics, or food science is required for a job as a packaging engineer.

### To pursue a career as packaging engineer:

The following high school courses are recommended: agricultural education, physics, computer courses, biology and mathematics.

### Where can I work?

Food, chemical, and seed production companies hire packaging engineers to design packaging for their products.

Salary Range: \$54,675 - \$123,154

Average Salary: \$82,058



# SUSTAINABILITY PATHWAY



## Wind Turbine Technician

Wind turbine technicians (also known as "windtechs") are responsible for the installation, maintenance and repair of wind turbines.

### What education and training is required?

An associate's degree in applied sciences such as wind energy technology may meet job requirements. If you are in an area with a large wind turbine presence, you may be able to receive training specifically as a wind turbine technician, which is preferred.

### To pursue a career as a wind turbine technician:

The following high school courses are recommended: agricultural education, environmental science, physics, and computer courses.

### Where can I work?

The states that generate the most wind power are Texas, California, Oklahoma, Illinois, Kansas, Minnesota, Iowa, Oregon, Colorado, Washington, North Dakota, and Wyoming.

These states have a high demand for wind turbine technicians, but as the industry grows the need for wind turbine technicians will be more widespread.

Salary Range: \$31,016 - \$103,161

Average Salary \$56,565



# SUSTAINABILITY PATHWAY



## Packaging Manager

Packaging managers supervise packaging operations for finished products and goods at processing facilities. They manage operations by directing employees, maintaining packaging inventories and scheduling equipment maintenance. Packaging managers will look for opportunities to make packaging processes more efficient and sustainable by cutting waste or improving workflow.

### What education and training is required?

A bachelor's degree in supply chain management, operations, agricultural business or industrial engineering may be required. However, experience working in a manufacturing or industrial environment for multiple years is a requirement before taking on a managerial role.

### To pursue a career as a Packaging Manager:

The following high school courses are recommended: agricultural education, physics, computer skills, biology, and mathematics.

### Where can I work?

Packaging managers typically work for manufacturing or processing facilities across multiple industries including the food, beverage, chemical, animal and seed industries.

Salary Range: \$47,8578 - \$120,597  
Average Salary: \$75,970



# SUSTAINABILITY PATHWAY



## Sustainability Manager

A sustainability manager is responsible for managing a company or organization's environmental impact, resources and plans. They provide leadership to address energy use, resource conservation, waste management and any other aspects of a company which directly impacts their environmental footprint. Sustainability managers strategize plans with actionable steps and will work with departments help stay on track to meet their sustainability goals.

### What education and training is required?

A bachelor's degree in agribusiness, social science, environmental studies, environmental engineering, climatology, law or a related field is required to be a sustainability manager. Upper-level sustainability management positions may require higher levels of education.

### To pursue a career as a Sustainability Manager :

The following high school courses are recommended: agricultural education, environmental science, biology, earth science, chemistry, business and mathematics.

### Where can I work?

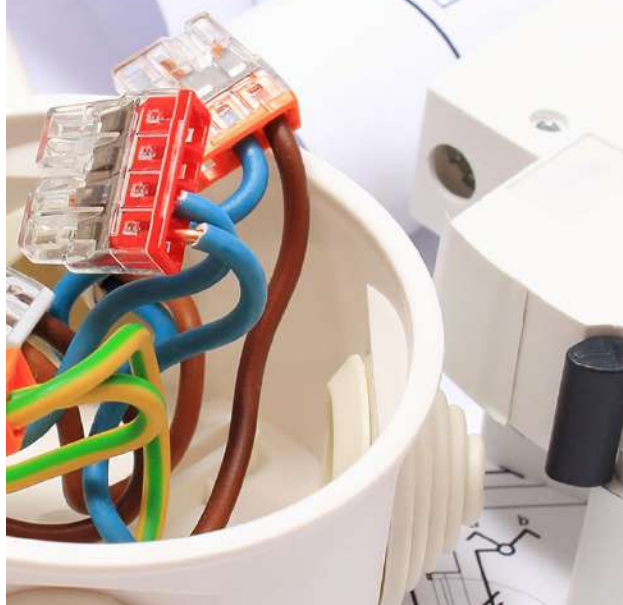
Sustainability managers most often work for medium- to large-scale agricultural and food companies and manufacturers. They may also work for consulting firms, municipal, state or federal governments, retail corporations and environmental organizations.

Salary Range: \$56,868 - \$126,420  
Average Salary: \$84,790





# TECHNOLOGY PATHWAY



## Computer System Analyst

A computer system analyst is responsible for helping organizations use their computer systems in a way that supports organizational goals. They determine where computer software and technologies can help coworkers in their roles. Computer analysts help to supervise the installation of new systems, determine its cost benefits and continuously review if the systems are working.

### What education and training is required?

Computer systems analysts typically have an associate or bachelor's degree in computer science, information technology, computer programming or a related field.

### To pursue a career as a Computer System Analyst:

The following high school courses are recommended: agricultural education, mathematics, statistics, business, personal finance and computer skills.

### Where can I work?

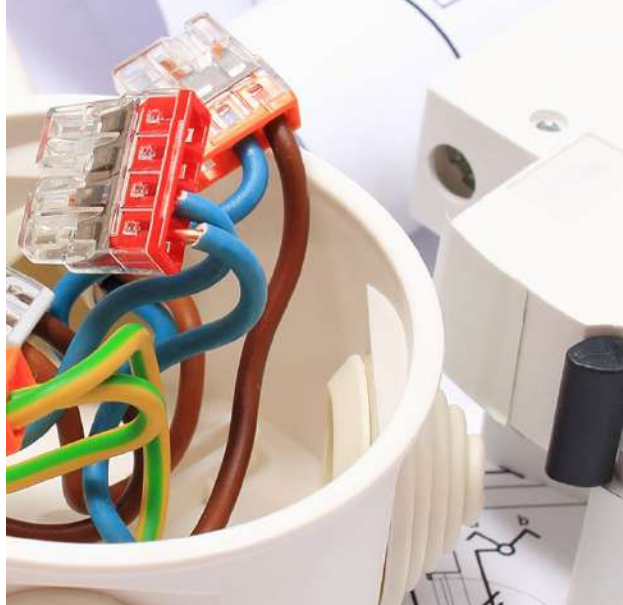
Computer analysts work across industries including agricultural, chemical companies, seed companies and animal production companies. Additionally, they may work at government agencies, universities and colleges.

Salary Range: \$53,559 - \$126,324

Average Salary: \$82,254



# TECHNOLOGY PATHWAY



## Data Analyst

Data analysts are responsible for collecting, analyzing and interpreting data for agricultural organizations. They take large sets of data, identify patterns and develop statistical and mathematical models that help businesses make better decisions. Data analysts must be able to convert complex information into easily understandable ways for diverse audiences.

### What education and training is required?

A master's degree in computer science, data science, mathematics, agricultural engineering or a related field is required. However, some employers may require a doctoral degree.

### To pursue a career as an Data Analyst:

The following high school courses are recommended: agricultural education, business, mathematics, statistics, coding, computer skills and personal finance.

### Where can I work?

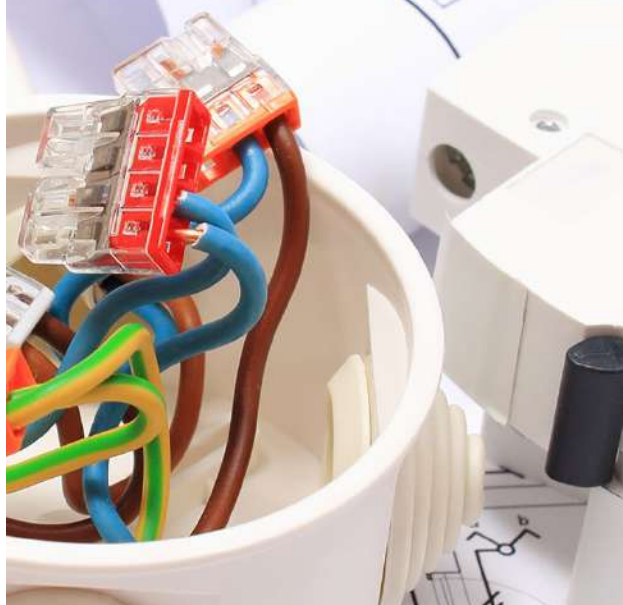
Data analysts work for the government, universities, colleges, food processing facilities, seed companies, and any agriculture companies that compile large amounts of data.

Salary Range: \$49,371 - \$117,014

Average Salary: \$76,007



# TECHNOLOGY PATHWAY



## Digital Marketing Lead

A digital marketing lead is responsible for managing various digital programs and initiatives across multiple online platforms to increase brand awareness, generate demand and drive revenue. They will perform market research to collect data and collaborate with other marketers to create successful marketing campaigns. Digital marketing leads typically specialize in a specific role in digital marketing such as managing social media engagement, search engine optimization or business marketing campaigns.

### What education and training is required?

Digital marketing leads typically have an associate degree or bachelor's degree in agribusiness, agricultural communications, marketing or a related field.

### To pursue a career as a Digital Marketing Lead :

The following high school courses are recommended: agricultural education, business, mathematics, statistics, art, computer skills and journalism.

### Where can I work?

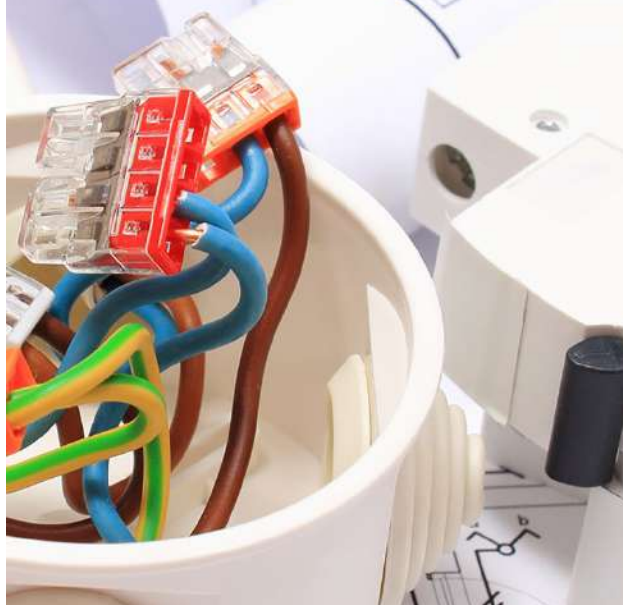
In today's digital landscape digital marketing leads are employed at almost all companies and organizations across industries.

Salary Range: \$36,523 - \$108,235

Average Salary: \$62,873



# TECHNOLOGY PATHWAY



## Information Technology (IT) Software Developer

Software developers create programs for computers or other devices that fill a specific need or niche within an agricultural business.

### What education and training is required?

A bachelor's degree in computer science or computer engineering is required.

### To pursue a career as a software developer:

The following high school courses are recommended: agricultural education, computer courses, mathematics and coding.

### Where can I work?

Agricultural companies that provide software solutions to producer/end user will employ software developers to create and maintain software programs.

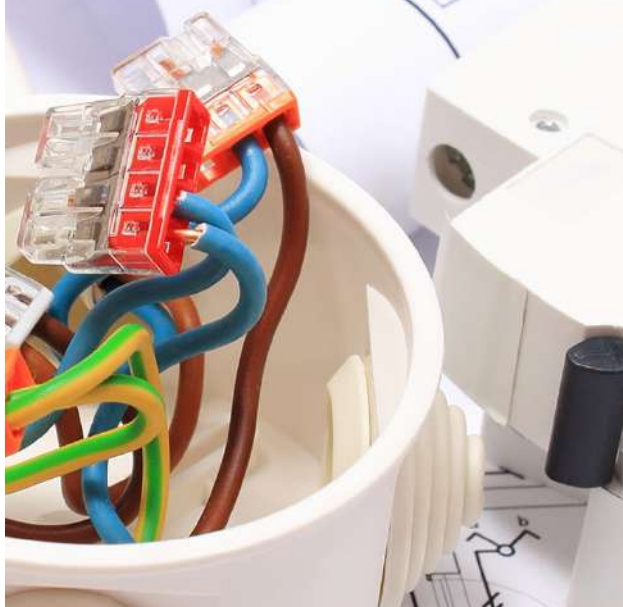
Salary Range: \$72,249 - \$183,342

Average Salary: \$115,092





# TECHNOLOGY PATHWAY



## Information Technology (IT) Specialist

Serves as support to branch offices and administrative office on all phases of technology use by employees.

### What education and training is required?

A bachelor's degree in information technology, computer science or related field is required.

### To pursue a career as a IT specialist:

The following high school courses are recommended: agricultural education, computer courses, mathematics and coding.

### Where can I work?

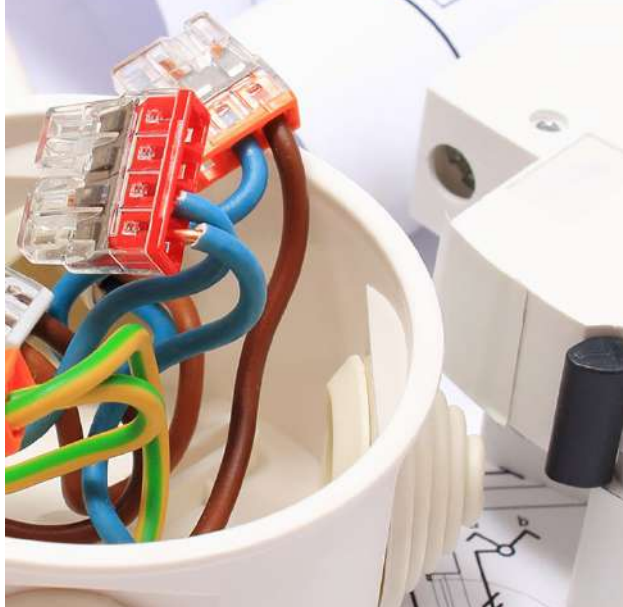
Most companies both large and small have IT specialists to maintain employee computers and company computing systems.

Salary Range: \$42,151 - \$110,781

Average Salary \$68,334



# TECHNOLOGY PATHWAY



## Research Specialist

A research scientist develops and hypothesizes scientific experiments that help solve problems across the agricultural fields. Either in a laboratory setting or out in the field, these professionals will carry out experiments, analyze data and develop reports based on the conclusions they have discovered. Research scientists collaborate with other scientists by attending conferences, talking with colleagues and presenting their results.

### What education and training is required?

A bachelor's degree in the field of research you are specializing in is required. For example, a weed scientist would need a degree in chemistry, crop science, agronomy, soil science or a related field. Some positions require high-level expertise, especially those in specialized fields that require a master's or doctorate degree.

### To pursue a career as a Research Scientist :

The following high school courses are recommended: agricultural education, mathematics, statistics, biology, chemistry, Spanish, business and computer skills.

### Where can I work?

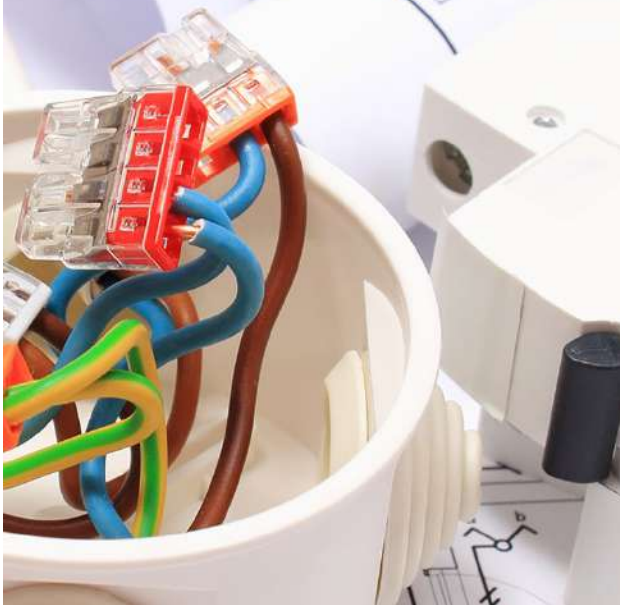
Research scientists work across many industries depending on their specialization (food, chemical, agricultural companies, etc.). They may also work for universities, extension offices or private research companies. There is an opportunity for self-employment by serving as a consultant.

Salary Range: \$52,643 - \$170,479

Average Salary \$94,734



# TECHNOLOGY PATHWAY



## Software Engineer

A software engineer is responsible for supporting agricultural operations by developing and maintaining software. They will research, design, evaluate, integrate and maintain software applications which solve agricultural problems such as how to sort fruit using computerized software. Software engineers ensure the functionality of their software applications to clients by providing help and creating user manuals.

### What education and training is required?

An associate or bachelor's degree in computer science, software engineering, information technology (IT) or a related field is required.

### To pursue a career as a Software Engineer :

The following high school courses are recommended: agricultural education, computer science, computer skills, mathematics and coding.

### Where can I work?

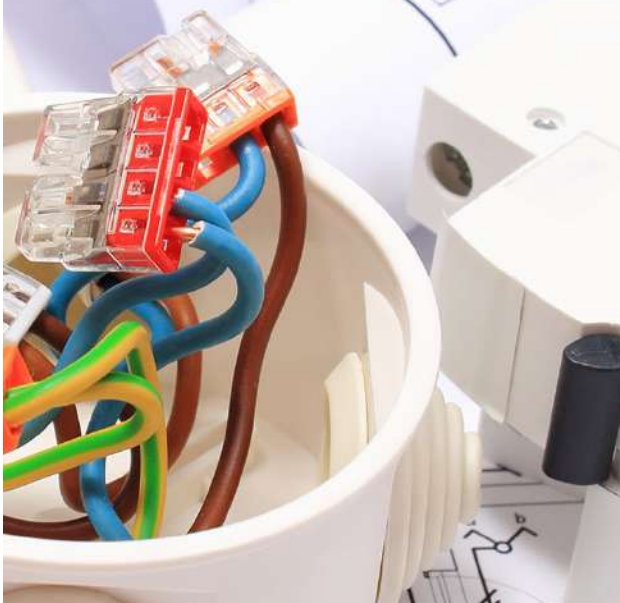
Software engineers can be hired across multiple industries depending on the requirements of the company and what they require. They are typically found at larger corporations across the industry, especially those that use specialized computer software for their production. They may also be employed at information technology consulting firms, research and development firms, the government, universities and colleges.

Salary Range: \$72,249 - \$183,342

Average Salary: \$115,092



# TECHNOLOGY PATHWAY



## Systems Administrator

A systems administrator is responsible for ensuring that computer software, operating systems, security tools and business applications are functioning correctly. They perform day-to-day maintenance and repairs including software and computer installations and upgrades. Additionally, they support the organization by providing technical support, automation, security maintenance and troubleshooting on computer systems.

### What education and training is required?

A systems administrator typically has an associate or bachelor's degree in computer science, information technology (IT), IT systems administration, IT operations or a related field.

### To pursue a career as a Systems Administrator :

The following high school courses are recommended: agricultural education, business, advanced mathematics and computer skills.

### Where can I work?

Systems administrators work for medium to large-scale agricultural and food companies of varying types. They may also work for nonprofits or government agencies.

Salary Range: \$52,646 - \$124,632

Average Salary: \$81,003

