

AgCareers.com developed 235 career profiles for high demand jobs in the agricultural industry. These career profiles are a helpful resource for students and job seekers to explore new roles in the industry, as well as for career educators. Included in this slide deck are 68 of the 235 career profiles.

Watch AgCareers.com's website and social media channels for the remaining infographics.



. TOP AGRICULTURAL CAREERS IN .

AG BUSINESS



Ag Science Teacher - Secondary

JOB OVERVIEW

Responsible for the education of agriculture, food science and natural resources for students

Educate students about career pathways in agriculture

Enhance youth leadership & FFA as integral part of instruction

Prepare materials such as syllabi, lesson plans, homework assignments and handouts

Supervise & maintain school lab areas (greenhouse, farm, etc.)

JOB OUTLOOK



EDUCATION NEEDED

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

RECOMMENDED H.S. COURSES

Ag education, science, mathematics

TYPICAL EMPLOYERS

Middle & high schools



Ag Financial Service Representative

JOB OVERVIEW

Responsible for creating & increasing unique loan/insurance portfolio (term, mortgage, operating loans)

Market credit & financial services & establish new market relationships

Generate reports that monitor credit, administrative documentation, debt management, annual reviews and evaluations

Assist in development of lending structures

JOB OUTLOOK



EDUCATION NEEDED

Bachelor's in agricultural business, finance or business administration

RECOMMENDED H.S. COURSES

Ag education, mathematics, economics, accounting, business

TYPICAL EMPLOYERS

Agricultural lending banks and agricultural insurance companies



Certified Appraiser

JOB OVERVIEW

Responsible for evaluating & placing monetary value on various items within the agricultural sector

Prepare accurate appraisal reports of both real & personal property

Analyze specific data in order to confirm value or determine risk

Conduct evaluations including site inspections for environmental risks

Extract data from highly developed internal & external sources



EDUCATION NEEDED

Associate's/Bachelor's in ag business, economics, or related.

RECOMMENDED H.S. COURSES

Ag education, science, geography, mathematics

TYPICAL EMPLOYERS

Agricultural lending companies, appraisal firms, law firms, insurance companies, government agencies, or you may be selfemployed.

JOB OUTLOOK



Commodity Procurement

JOB OVERVIEW

Responsible for overseeing commodities & trading, purchasing, and locating customer accounts for each commodity

Collaborate with formulators and managers to provide lowest cost options

Determine strategic supply objectives using tools and reports for decision making

Identify & develop a reliable base of qualified buyers

FAIR

JOB OUTLOOK

POOR



EDUCATION NEEDED

Bachelor's in ag business, supply chain management or related

RECOMMENDED H.S. COURSES

Ag education, science, mathematics, business

TYPICAL EMPLOYERS

Integrated animal production companies, seed/fertilizer/chemical dealers & producers, food production companies, cooperatives, elevator companies



Customer Service Representative

JOB OVERVIEW

Ensure clients are satisfied and their needs are met

Responsible for sales administration in office environment

Liaison between customers & company by ensuring prompt & efficient processing of requests and orders

Process & follow up customer sales, complaints and service enquiries

JOB OUTLOOK





Associate's in ag business or related field

RECOMMENDED H.S. COURSES

Ag education, a focus on science (animal science, biology), mathematics

TYPICAL EMPLOYERS

Food production, equipment sales, chemical, seed production, animal health & financial services companies; retail businesses, co-ops



Farm Business Manager / Accountant

JOB OVERVIEW

Analyze, report & give advice for a company or farm's financial well-being

Conduct strenuous record keeping

& oversee management accounts, budgeting & administration of accounting tasks

Cost & price stock items including in-progress & finished products

Assist management in preparing documentation for budgeting & financial reporting procedures

JOB OUTLOOK





RECOMMENDED H.S. COURSES

administration

Ag education, mathematics, economics, accounting, business

TYPICAL EMPLOYERS

Agricultural lending banks and agricultural insurance companies



Grain Elevator Manager

JOB OVERVIEW

Responsible for storing, shipping & buying grain

Supervise, lead & develop assigned full-time & part-time employees

Responsible for grain handling including incoming, stored & outgoing grain

Maintain grain quality, blending & provide grain drying services

Implements grain pricing, considering sample & inspection grade on all grain shipments

JOB OUTLOOK



EDUCATION NEEDED

Associate's/Bachelor's in ag business, economics, marketing or agronomic related area

RECOMMENDED H.S. COURSES

Ag education, biology, chemistry, mathematics

TYPICAL EMPLOYERS

Agricultural retail suppliers, processing companies & cooperatives

POOR

FAIR

GOOD

GREAT

EXCELLENT



Human Resources Generalist

JOB OVERVIEW

Responsible for main HR duties: recruitment, development, employment

Coordinates performance management & improvement systems

Focus on emmployee orientation, development & training

Develops policy & documentation and maintains employee relations

Develop, post & manage company job postings

JOB OUTLOOK



EDUCATION NEEDED

Bachelor's in human resources or ag business

RECOMMENDED H.S. COURSES

Ag education, mathematics

TYPICAL EMPLOYERS

Food production, equipment sales, chemical, seed production, animal health & financial services companies; retail businesses, co-ops



Logistics / Supply Chain Management

JOB OVERVIEW

Develop plan to ensure least cost for material management

JOB OUTLOOK

POOR FAIR GOOD GREAT EXCELLENT



Bachelor's/Master's in Ag Business or Economics

RECOMMENDED H.S. COURSES

Ag education, science, mathematics

TYPICAL EMPLOYERS

Integrated animal production companies, seed/fertilizer/chemical dealers & producers, food production companies, equipment manufacturers





Marketing Specialist

JOB OVERVIEW

Responsible for getting the appropriate communication message & medium delivered to the public

Plan, develop, direct efforts for distribution of company product

Develop marketing strategy for the organization (advertising, promotions, public relations, trade marketing, digital & social media)

Coordinate & execute special events

JOB OUTLOOK

POOR FAIR GOOD

GREAT

EXCELLENT

EDUCATION NEEDED

Bachelor's in ag business, marketing, journalism, communications or education

RECOMMENDED H.S. COURSES

Ag education, science, mathematics

TYPICAL EMPLOYERS

Seed, feed, fuel, fertilizer, plant, animal pharmaceuticals & equipment companies; advertising agencies, or may be self-employed



Public Relations Specialist

JOB OVERVIEW

Develop & correlate an influential company brand for clients & employees

Prepare external & internal communications

Create public relations opportunities & media coaching for senior managers

Support management with media liaison, media releases, speeches & promotional material

JOB OUTLOOK





Bachelor's in ag business, marketing, journalism, communications or education

RECOMMENDED H.S. COURSES

Ag education, science, mathematics

TYPICAL EMPLOYERS

Seed, feed, fuel, fertilizer, plant, animal pharmaceuticals & equipment companies; advertising agencies, or may be self-employed



Sales Representative

JOB OVERVIEW

Market food, seed, feed & fuel products to different companies within agriculture & assigned territory

Maintain & grow a territory of accounts

Introduce new products, promote improved distribution & ensure promotional results

Provide educational training to accounts through seminars & trade events

JOB OUTLOOK





EDUCATION NEEDED

Bachelor's in ag business or related to product representing

RECOMMENDED H.S. COURSES

Ag education, mathematics, economics, biology, chemistry, botany

TYPICAL EMPLOYERS

Commodity supply, seed production, chemical/fertilizer, animal processing & health companies; equipment dealerships



Warehouse Manager

JOB OVERVIEW

Supervise staff, security, processes & procedures within store facilities & warehouses

Organize receipts, storage & sale of goods

Maintain stock records & documentation on incoming & outgoing stocks

Ensure inventory is stored in accordance with safety records & company policy

JOB OUTLOOK

POOR FAIR GOOD GREAT EXCELLENT

SEED

EDUCATION NEEDED

Associate's/Bachelor's in ag business or related field depending on industry

RECOMMENDED H.S. COURSES

Ag education, focus on science (animal science & biology), mathematics

TYPICAL EMPLOYERS

Food production, equipment sales, chemical, seed production, animal health companies; co-ops; retail businesses



. TOP AGRICULTURAL CAREERS IN .

AG MECHANICS



Carpenter | Laborer

JOB OVERVIEW

Responsible for implementing general maintenance, mechanical and carpentry duties

Unload, carry and stack material and place tool and equipment in position

Operate wheel loaders, forklifts, skid steers and similar equipment

Build wooden fixtures used in buildings, using woodworking machines, hand tools and power tools

FAIR

JOB OUTLOOK

POOR



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EDUCATION NEEDED

High school diploma with certifications

RECOMMENDED H.S. COURSES

Ag education, a focus on science, industrial arts, mathematics

TYPICAL EMPLOYERS

Food processing companies, meat processing companies, research firms, agronomic facilities as well as environmental agencies



Electrical Engineer

JOB OVERVIEW

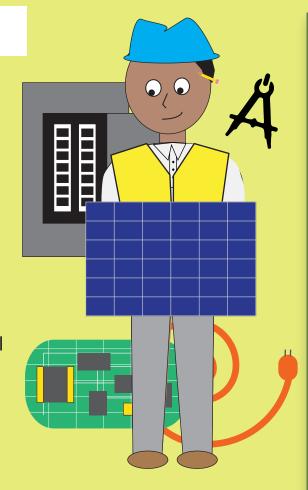
Use technology to install, repair, service & create electrical operations

Create electricity generating stations using semiconductors on a circuit board while developing a new electronic device

Oversee installation, maintenance & repair of new & existing electrical systems

Design blueprints & diagrams for electrical componenets

JOB OUTLOOK



EDUCATION NEEDED

Bachelor's in electrical, industrial, mechanical or agricultural engineering

RECOMMENDED H.S. COURSES

Ag education, a focus on physical science, mathematics

TYPICAL EMPLOYERS

Farm equipment manufacturers, grain milling operations, reserach firms, meat processing companies, government agencies



Electrician

JOB OVERVIEW

Implement wiring & maintenance for mechanical equipment in electrical systems

Installation, maintenance, repair of electrical systems

Troubleshoot & diagnose electrical problems

Perform preventative maintenance to avoid operational failures of electrical systems

Provide drawings & suggestions related to inspection & testing

JOB OUTLOOK



EDUCATION NEEDED

High School Diploma, but Associate's in a related technology field preferred

RECOMMENDED H.S. COURSES

Ag education, a focus on science, mathematics

TYPICAL EMPLOYERS

Farm equipment dealers & manufacturers, grain milling operations, research firms, meat processing companies, government agencies

POOR

FAIR

GOOD

GREAT

EXCELLENT



Hydraulics Technician

JOB OVERVIEW

Oversee & implement the installation, maintenance, and repairs for hydraulic components of equipment

Troubleshoot & diagnose problems

Perform preventative maintenance to avoid operational failures of hydraulic systems

Welding, metal fabrication & electrical assembly

Provide drawings & suggestions related to inspection & testing

JOB OUTLOOK



ARMY

EDUCATION NEEDED

High school diploma, but Associate's in industrial equipment technologies, mechanics, or HVAC preferred

RECOMMENDED H.S. COURSES

Ag education, a focus on science, mathematics

TYPICAL EMPLOYERS

Farm equipment dealers & manufacturers, government agencies



Maintenance | Service Technician

JOB OVERVIEW

Repair agricultural implements & lawn & garden equipment

Work with diesel and gasoline engines as well as transmissions

Perform preventative maintenance to avoid operational failures of mechanical systems

Welding, metal fabrication & electrical assembly

Operate drill press, grinders, engine lathe or other machines to modify parts tested or fabricate parts

JOB OUTLOOK



EDUCATION NEEDED

High school diploma or preferably an Associate's in industrial equipment technologies, mechanics, heavy equipment and transport technology

RECOMMENDED H.S. COURSES

Ag education, a focus on science, mathematics

TYPICAL EMPLOYERS

Farm equipment dealers & manufacturers



Truck Driver

JOB OVERVIEW

Receive, transport & deliver products within the ag industry

Observe all government & company regulations at all times

Identify needed maintenance on tractor or trailer requiring attention and inspect for safety

Accurately complete delivery forms and forward documentation for timely processing

Monitor livestock conditions if hauling & take appropriate action

JOB OUTLOOK



EDUCATION NEEDED

High school diploma plus CDL certification

RECOMMENDED H.S. COURSES

Ag education, a focus on sciences like animal science and biology, mathematics

TYPICAL EMPLOYERS

Food production companies, grain merchandising companies, chemical companies, co-ops, seed production companies

POOR

FAIR

GOOD

GREAT

EXCELLENT



Welder

JOB OVERVIEW

Weld equipment, especially machines, and framework for buildings

Read & interpret layout plans, blueprints, or other drawings

Maintenance & repair of equipment

Troubleshoot & diagnose problems

Complete steel construction, working high in the air, underwater or in shop setting

JOB OUTLOOK



EDUCATION NEEDED

High school diploma & in most cases a welding certificate

RECOMMENDED H.S. COURSES

Ag education, a focus on science, mathematics

TYPICAL EMPLOYERS

Farm equipment dealers or manufacturers, seed production companies, cooperatives, feed & grain companies, wind energy companies, food production companies



. TOP AGRICULTURAL CAREERS IN .

ANIMAL SCIENCE



Animal Biotechnologist

JOB OVERVIEW

Responsible for researching how nutrients in feed and/or animal reproductive processes impact animal health

Create methods for more efficient production using their research findings

Distribute technical information to veterinarians or related animal health personnel

Analyze client needs & develop nutritional plans for animals

JOB OUTLOOK



EDUCATION NEEDED

Master's degree in Animal Science

RECOMMENDED H.S. COURSES

Ag education, a focus on science (earth science, chemistry, biology), mathematics

TYPICAL EMPLOYERS

Food production companies, contract growers, animal pharmaceutical companies, university research farms. May be self-employed.



Animal Caretaker

JOB OVERVIEW

Responsible for care of animal production facilities for food consumption

Animal husbandry duties like bedding, feeding, watering, medicating, vaccinating, lighting, natural breeding, pregnancy-check

Maintain farm records such as wellness, flock/herd records, maintenance schedules, costs

Work with contract growers to ensure consistency with goals

JOB OUTLOOK



EDUCATION NEEDED

Associate's/Bachelor's in Animal Science or related major

RECOMMENDED H.S. COURSES

Ag education, a focus on science (animal science, biology), mathematics

TYPICAL EMPLOYERS

REEL

Food production companies, contract growers, university research farms. Some opportunities to be self-employed.



Feedlot Manager

JOB OVERVIEW

Oversee daily operations of feed yards

Provide knowledge & support for herd nutrition, marketing and environmental conditions for livestock in feedlots

Ensure profitable operations of the feedlot to optimize feeding guidelines

Manage safety standards & relations with employees, suppliers, and customers

JOB OUTLOOK



EDUCATION NEEDED

Associate's in Animal Science or agricultural business

RECOMMENDED H.S. COURSES

Ag education, a focus on science (animal science, biology), mathematics

TYPICAL EMPLOYERS

Food production companies, contract growers with integrated production facilities, or you may be self-employed



Food Animal Veterinarian

JOB OVERVIEW

Responsible for care of animals raised for food production

Provide medical care consisting of research, diagnoses, and prevention

Provide technical expertise in health management including biosecurity, disease identification, prevention, control and treatment, and food safety requirements

Test and vaccinate, prevent and control contagious animal diseases



EDUCATION NEEDED

Doctorate of Veterinary Medicine.

RECOMMENDED H.S. COURSES

Ag education, a focus on science (animal science, biology, chemistry, physical science), mathematics

TYPICAL EMPLOYERS

Food production companies, government agencies, and some university research farms

JOB OUTLOOK

POOR FAIR

GOOD

GREAT

EXCELLENT



Livestock Buyer

JOB OVERVIEW

Sell, buy and select livestock for individuals and companies

Identify livestock purchase opportunities on a daily basis by offering a range of pricing, hedging and service alternatives to growers in the designated region

Negotiate price with growers & suppliers

Prepare regular reports for analysis on competitor activity & trends

JOB OUTLOOK

POOR FAIR GOOD GREAT EXCELLENT

EDUCATION NEEDED

Associate's/Bachelor's in Animal Science or agricultural business

RECOMMENDED H.S. COURSES

Ag education, a focus on science (animal science, biology), mathematics

TYPICAL EMPLOYERS

Food production companies, contract growers, auctioneer companies, or you may be self-employed



Meat Inspector

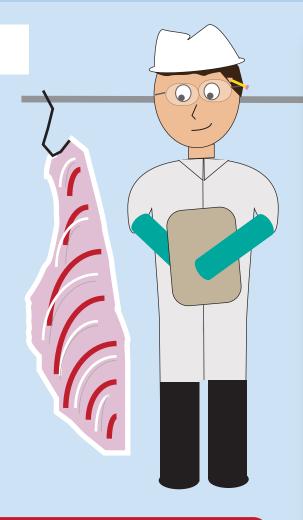
JOB OVERVIEW

Ensure that meat is safe from contamination and the process it goes through follows quality assurance regulations

Inspect and grade various types and cuts of meat

Inspect live animals, game or poultry for any signs of disease

Perform quality control analysis including tests and inspections of products and processes



EDUCATION NEEDED

Bachelor's in Food Science, Microbiology or Meat Science

RECOMMENDED H.S. COURSES

Ag education, a focus on science (animal science, biology, chemistry, physical science), mathematics

TYPICAL EMPLOYERS

Food or meat processing companies, state and federal government agencies

JOB OUTLOOK



Sales Representative

JOB OVERVIEW

Sell feed & animal health products

Distribute technical information to veterinarians or related animal health personnel

Analyze, develop and implement sales goals and plans

Maintain & grow market share within your sales territory

Participate in brand forecasting function & accuracy

JOB OUTLOOK



FEED



Bachelor's in Animal Science, agricultural business, or related major

RECOMMENDED H.S. COURSES

Ag education, a focus on science (animal science, biology), chemistry, mathematics

TYPICAL EMPLOYERS

Feed and animal nutrition companies



Veterinary Technician

JOB OVERVIEW

Responsible for well-being of animals under the care of a veterinarian

Work hand-in-hand with veterinarians providing essential medical procedures to ensure animal health

Perform laboratory tests, X-rays, and radiographs

Treat injuries for farm animals

Assist veterinarian in treatment and surgeries

JOB OUTLOOK



EDUCATION NEEDED

Associate's/Bachelor's Veterinary Technology or Animal Science

RECOMMENDED H.S. COURSES

Ag education, a focus on science (animal science, biology), mathematics

TYPICAL EMPLOYERS

Veterinary clinics, university research farms, diagnostic laboratories, zoos, animal control facilities, wildlife preserves



. TOP AGRICULTURAL CAREERS IN .

ENVIRONNENT SERVICES



Environmental Compliance Officer

JOB OVERVIEW

Responsible for making sure environmental laws for water, gas, energy, oil, etc. are implemented & carried through

Perform environmental compliance audits

Develop plans, permits & procedures for air quality, hazardous waste, spill prevention, storm water and wastewater

Utilize geo-statistical software

JOB OUTLOOK



EDUCATION NEEDED

Bachelor's in engineering, soil science, biology or environmental science

RECOMMENDED H.S. COURSES

Ag education, a focus on science, earth science, biology, botany, chemistry, mathematics

TYPICAL EMPLOYERS

Research firms, food animal production companies, governmental organizations, schools/universities & environmental agencies



Environmental Engineer

JOB OVERVIEW

Responsible for researching problems within the environment & creating solutions

Research & analyze naturally occurring environmental weather patterns to make recommendation for preserving habits

Create company environmental management system and protocols

Ensure compliance with environmental regulations

JOB OUTLOOK



EDUCATION NEEDED

Bachelor's in Ag, Civil, Chemical or Environmental Engineering

RECOMMENDED H.S. COURSES

Ag education, earth science, chemistry, biology, botany, mathematics

TYPICAL EMPLOYERS

Research companies, food science companies, governmental organizations, schools and universities, environmental agencies



Environmental Protection Technician

JOB OVERVIEW

Implement environmental monitoring

Conduct field sampling of the air, water, and soil

Carry out hazardous goods and waste handling methods

Enforcement of environmental law and ethics including recycling and minimization

Inspect sanitary conditions at public facilities & private property

JOB OUTLOOK

POOR FAIR GOOD GREAT EXCELLENT

EDUCATION NEEDED

Associate's/Bachelor's in Natural Resources, Soil Science or related major

RECOMMENDED H.S. COURSES

Ag education, earth science, chemistry, biology, botany, mathematics

TYPICAL EMPLOYERS

Seed & crop protection companies, universities, government agencies, consulting firms, research labs, museums, field stations, parks & recreation



Environmental Scientist & Specialist

JOB OVERVIEW

Provide the means to comply with company programs and regulatory requirements through land and nutrient management facilities

Study living organisms in relationship to their environment

Investigate growth & characteristics of microscopic organisms such as bacteria, algae or fungi

Use biotechnology to advance knowledge of cell production & disease in plants

JOB OUTLOOK



EDUCATION NEEDED

Bachelor's/Master's/
Doctorate in
Horticulture, Chemistry
or Environmental
Science

RECOMMENDED H.S. COURSES

Ag education, earth science, biology, botany, chemistry, mathematics

TYPICAL EMPLOYERS

Governmental organizations, schools, universities, environmental organizations



Waste Management Specialist

JOB OVERVIEW

Create adequate means for the removal & treatment of animal & food waste from the environment

Prepare & maintain environmental settings & regulatory compliance

Conduct clean up following natural disasters

Operate heavy machinery

Monitor processes that remove or destroy harmful materials, chemicals & microorganisms from the water or land

JOB OUTLOOK

POOR FAIR GOOD GREAT EXCELLENT

EDUCATION NEEDED

Bachelor's in Ag Engineering or Agronomy

RECOMMENDED H.S. COURSES

Ag education, earth science, biology, botany, chemistry, mathematics

TYPICAL EMPLOYERS

Food animal production companies, crop and chemical companies, governmental organizations and agencies



• TOP AGRICULTURAL CAREERS IN •

FOOD SCIENCE



Food Production Supervisor

JOB OVERVIEW

Responsible for overseeing either entire assembly lines or one entity

Obtain maximum efficiency at a low cost within specified standards

Establish policies and procedures that assure products are developed, manufactured, and marketed with superior quality

Manage & coordinate companywide regulatory guidance, training and compliance effort

BEANS

EDUCATION NEEDED

Bachelor's degree in Food Science, Food Engineering, Business or Industrial Engineering

RECOMMENDED H.S. COURSES

Ag education, biology, chemistry, mathematics

TYPICAL EMPLOYERS

Food production and food ingredients companies

JOB OUTLOOK

POOR

FAIR

GOOD

GREAT

EXCELLENT



Food Safety Specialist

JOB OVERVIEW

Responsible for meeting food safety standards

Oversee that foods are processed, packaged, and prepared according to those specific standards

Prepare reports on each company, restaurant, or business visited

Compute formulas, percentages or production specific factors using chemical and mathematical procedures

JOB OUTLOOK

POOR FAIR GOOD GREAT EXCELLENT

EDUCATION NEEDED

Bachelor's in Food Science, Chemistry, Microbiology or Environmental Health

RECOMMENDED H.S. COURSES

Ag education, biology, chemistry, mathematics

TYPICAL EMPLOYERS

Food production companies and government inspection agencies



Quality Assurance Manager

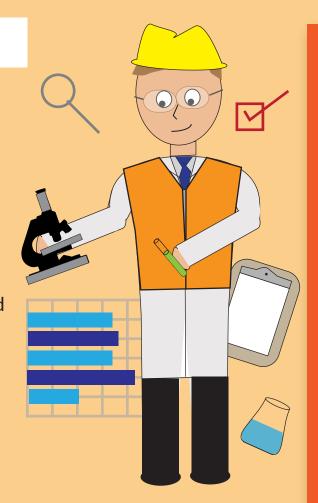
JOB OVERVIEW

Abide by regulatory authority compliance for food production companies

Responsible for the quality control aspects of raw materials and finished products

Prepare reports on tests performed for the measurement of quality, quantity and composition

Sample & identify, if any, bacterial or non-desirable excess material



EDUCATION NEEDED

Bachelor's in Food Science, Chemistry, Microbiology or Environmental Health

RECOMMENDED H.S. COURSES

Ag education, biology, chemistry, mathematics

TYPICAL EMPLOYERS

Food production companies, food chemical supply companies, government inspection agencies

JOB OUTLOOK

POOR FAIR GOOD GREAT EXCELLENT



Nutritionist | Dietician

JOB OVERVIEW

Point of contact for individuals or companies wanting advice on eating programs, healthy food selection, and the alteration of diets to achieve nutrition/diet needs

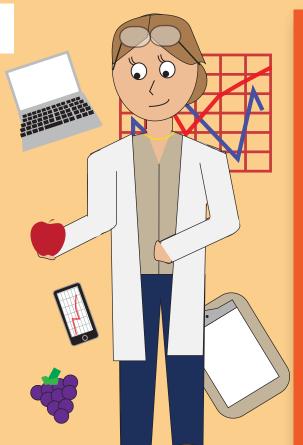
Complete initial patient screenings

Coordinate planning, implementation, and evaluation of individual nutrition programs

Work with family physician & other medical staff to ensure quality patient care

JOB OUTLOOK





EDUCATION NEEDED

Bachelor's in Dietetics, Food Science, or Nutrition

RECOMMENDED H.S. COURSES

Ag education, family and consumer sciences, chemistry, mathematics

TYPICAL EMPLOYERS

Food production companies; food ingredient companies; restaurants; school, community and government groups



Product Development Food Scientist

JOB OVERVIEW

Research & revamp process of canning, freezing, storing and packaging food

Design, develop & test processes & processing equipment for food processing factories

Evaluate & record costs of processes and equipment

Work with quality assurance teams to maintain food product standards & identify any problems

JOB OUTLOOK

POOR FAIR GOOD GREAT EXCELLENT



Bachelor's/Master's in Food Science, Nutrition, Food Engineering

RECOMMENDED H.S. COURSES

Ag education, biology, chemistry, mathematics

TYPICAL EMPLOYERS

Food production companies, government inspection agencies, colleges and universities



R & D Technician

JOB OVERVIEW

Responsible for assisting a researcher or team with product development projects

Ensure accurate sample preparation (weigh, measure, data record keeping)

Operate lab/kitchen and plant equipment and maintaing culinary presentation tools

Develop & maintain recipes and compute formulas using chemical procedures

JOB OUTLOOK

POOR FAIR GOOD GREAT EXCELLENT

EDUCATION NEEDED

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Associate's in Chemistry, Biology, Food Science or Food Technology. Some companies may require Bachelor's degree.

RECOMMENDED H.S. COURSES

Ag education, biology, chemistry, mathematics

TYPICAL EMPLOYERS

Food production companies, food chemical supply companies, government inspection agencies



. TOP AGRICULTURAL CAREERS IN .

NATURAL RESOURCES



Biological Technician

JOB OVERVIEW

Responsible for researching helping & supporting conservationists and environmental scientists in laboratory research on life cycles of living organisms

Conduct field sampling of air, water, soil, crops, fruits, vegetables, ornamentals

Evaluate samples for methods to improve yeild, quality, adaptation, climate and pest

Control exotic, invasive plants

JOB OUTLOOK



EDUCATION NEEDED

Associate's/Bachelor's in Natural Resources or related major

RECOMMENDED H.S. COURSES

Ag education, earth science, chemistry, physics, biology, botany, mathematics

TYPICAL EMPLOYERS

Ag research firms; government, environmental, convervation, & food processing organizations, universities

POOR

FAIR

GOOD



Conservationist

JOB OVERVIEW

Responsible for improving, protecting & managing earth's natural resources

Research conservation practices to provide sustained production of forage, livestock and wildlife

Maintain soil stability & vegetation for non-grazing uses

Manage forage resources through fire, herbicide use, or re-vegetation to maintain a sustainable yield from land

JOB OUTLOOK



EDUCATION NEEDED

Bachelor's in Natural Resources, Soil Science or related major

RECOMMENDED H.S. COURSES

Ag education, earth science, chemistry, biology, botany, mathematics

TYPICAL EMPLOYERS

Research firms; government, environmental, conservation organizations; universities



Conservation Officer

JOB OVERVIEW

Strive to secure & protect natural areas

Assist with research projects or studies to conserve management practices

In park settings, patrol backcountry areas, provide emergency services, manage wildlife/human interactions, and educate visitors

Manage forage resources through fire, herbicide use, re-vegetation to maintain sustainable yield from land

JOB OUTLOOK



EDUCATION NEEDED

Bachelor's in Natural Resources, Soil Science or related major

RECOMMENDED H.S. COURSES

Ag education, earth science, chemistry, biology, botany, mathematics

TYPICAL EMPLOYERS

Research firms; governmental, environmental & conservation organizations

POOR FAIR GOOD GREAT EXCELLENT



Hydrologist

JOB OVERVIEW

Oversee & implement examination of water

Research movement of water in environment and impact it has

Perform environmental consulting

Design dams, ponds, piping and pumping systems, sewage systems

Predict changes in climates and ecosystems

Advise clients on how to preserve their water sources

JOB OUTLOOK



EDUCATION NEEDED

Bachelor's/Master's in Biology or related environmental field

RECOMMENDED H.S. COURSES

Ag education, science, biology, chemistry, earth science, geology, physics, mathematics

TYPICAL EMPLOYERS

Research firms, environment consulting companies, authorities in conservation, state and federal govenment, universities



Restoration Specialist

JOB OVERVIEW

Research link that connects environment to organisms in differentiated situations

Make recommendations on how to improve and replenish ecosystems

Investigate characteristics of microscopic organisms

Research cell reproduction and human disease

Study & collect data on quality of air, food, soil and water

JOB OUTLOOK



EDUCATION NEEDED

Bachelor's in Biology or related field (Chemistry, Horticulture)

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RECOMMENDED H.S. COURSES

Ag education, earth science, biology, botany, chemistry, mathematics

TYPICAL EMPLOYERS

Universities, government agencies, consulting firms, research labs,museums, field stations, parks and recreation areas



. TOP AGRICULTURAL CAREERS IN .

PLANT SCIENCE



Agronomy Sales & Management

JOB OVERVIEW

Responsible for providing support & knowledge of agronomic products to customers

Provide seed & fertilizer advice in relation to research & production of crops directly to farmer

Provide crop rotation & husbandry advice

Market specific products to farmers in order to aid in these practices

FAIR

GOOD

JOB OUTLOOK

POOR



EDUCATION NEEDED

Bachelor's in Agronomy, Crop Science, or Soil Science. May also have Ag Business degree with Agronomy minor.

RECOMMENDED H.S. COURSES

Ag education, a focus on science (earth science, chemistry, biology), mathematics, physics

TYPICAL EMPLOYERS

Seed companies, crop protection companies, cooperatives



Custom Applicator

JOB OVERVIEW

Apply pesticides or fertilizer in fields

Operate & maintain all spray equipment

Handle and deliver bulk and packaged chemicals

Perform daily vehicle inspections

Organize and coordinate application timetable with customers

JOB OUTLOOK



EDUCATION NEEDED

Associate's degree not required but would enhance opportunity to obtain a job

RECOMMENDED H.S. COURSES

Ag education, science, biology, chemistry, mathematics, business

TYPICAL EMPLOYERS

Seed companies, crop protection companies, cooperatives, large farms, or you may be self- employed



Entomologist

JOB OVERVIEW

Responsible for researching the growth, nutrition, behavior, and how insects interact with plants

Monitor insect feeding behavior, insect physiology, plant-insect interactions

Weigh, formulate and apply experimental and commercial insecticides to pest targets and habitats

Manage trial establishment and collection of data

JOB OUTLOOK

POOR FAIR GOOD GREAT EXCELLENT

EDUCATION NEEDED

Doctorate in Entomology, Biology or Zoology. Some roles may only require a Master's or Bachelor's.

RECOMMENDED H.S. COURSES

Ag education, earth science, chemistry, biology, botany, mathematics

TYPICAL EMPLOYERS

Conservation organizations, colleges, universities, or you may be a self-employed consultant



Golf Course Superintendent

JOB OVERVIEW

Responsible for overseeing golf course management, maintenance, and operations

Grow, maintain and manicure varieties of turf grasses

Routine inspection of equipment and vehicles

Manage & document chemical, pesticide & fertilizer use in accordance with regulations



EDUCATION NEEDED

Some courses may offer this role to someone with an associates degree but most require a bachelors degree in agronomy, horticulture or agronomy.

RECOMMENDED H.S. COURSES

Ag education, biology, chemistry, mathematics

TYPICAL EMPLOYERS

Private or public golf courses

JOB OUTLOOK

POOR FAIR GOOD GREAT EXCELLENT



Horticulturist

JOB OVERVIEW

Oversee the production & care of plants, fruits & vegetables

Manage crop scheduling for timing of appropriate planting & harvesting

Perform propagation, irrigation & pest management

Control plant growth regulation through mixing and testing fertilizers

Greenhouse environment management & maintenance

JOB OUTLOOK



EDUCATION NEEDED

Post-secondary education beneficial but not required. Pesticide License preferred.

RECOMMENDED H.S. COURSES

Focus on sciences, mathematics, and computer science

TYPICAL EMPLOYERS

Plant and food production businesses, research firms, homeowners, municipalities



Landscape Designer

JOB OVERVIEW

Responsible for creating, presenting, and overseeing development of landscapes for individuals and companies

Create garden designs on paper and in the field using perennials, annual color edibles, containers & outdoor furniture

Analyze natural & manmade elements of the area including soil, slope, drainage, natural vegetation, lighting, etc.

JOB OUTLOOK



EDUCATION NEEDED

Associate's/Bachelor's in Landscape Design, Horticulture or Turf Grass

RECOMMENDED H.S. COURSES

Biology, botany, earth science, geography, mathematics, business

TYPICAL EMPLOYERS

Greenhouses, nurseries, government agencies, golf courses, athletic venues or universities



Plant Breeder

JOB OVERVIEW

Research of seed characteristics & strives to improve characteristics that are of the best quality for the plant

Work toward finding best possible trait desirable for yield, maturity, quality, size, resistant to drought, frost and pests

Develop breeding program and schedule & maintain and forecast a budget for activities



EDUCATION NEEDED

Bachelor's in Crop Science, Plant Genetics or Agronomy. In many cases, PhD or Master's required.

RECOMMENDED H.S. COURSES

A focus on science (biology, chemistry, physics), mathematics, business and computer science

TYPICAL EMPLOYERS

Seed and biotechnology companies, government, universities, cooperatives

JOB OUTLOOK

POOR FAIR GOOD GREAT EXCELLENT



Landscape Technician

JOB OVERVIEW

Grow & maintain plants on properties

Manage & redesign a variety of plants and the construction of hardscapes

Maintenance & installation of sprinkler systems

Construct walkways, walls and small foot bridges

Create & adhere to various watering and feeding schedules

MULCH

EDUCATION NEEDED

Associate's/Bachelor's in Landscape Horticulture, Turf Grass, Plant Science, or related field

RECOMMENDED H.S. COURSES

Ag education, a focus on science (biology, botany, earth science), mathematics, geometry

TYPICAL EMPLOYERS

Greenhouses, nurseries, government agencies, residential communities, athletic venues or universities

JOB OUTLOOK

POOR FAIR GOOD GREAT EXCELLENT



Plant Scientist | Field Agronomist

JOB OVERVIEW

Plan, budget, establish, perform & document research trials and projects related to agronomic crops

Develop, conduct & evaluate tolerance for species at seedling state of growth

Understand the farmland (ground conditions, farming challenges, pest issues)

Evaluate products, collect data on performance in different locations & make recommendations

JOB OUTLOOK



EDUCATION NEEDED

Master's/PhD in plant breeding, agronomy, or related field

RECOMMENDED H.S. COURSES

Ag education, a focus on science (earth science, biology, botany), mathematics

TYPICAL EMPLOYERS

Seed companies, crop protection companies, research firms, government, environmental organizations, colleges



Research Associate

JOB OVERVIEW

Work under the watch of principal investors

Responsible for correlating, implementing, documenting research trials and assignments

Work within agreed budget & reporting deadlines as planned and coordinated by Research Manager

Utilize state-of-the-art technologies to complete research projects as they related to a particular project

JOB OUTLOOK





EDUCATION NEEDED

Bachelor's/Master's in plant breeding, agronomy, or related

RECOMMENDED H.S. COURSES

Ag education, a focus on science (earth science, biology, chemistry, botany), mathematics

TYPICAL EMPLOYERS

Seed companies, crop protection companies, research firms, government, environmental organizations, colleges



Seed Production Technician

JOB OVERVIEW

Responsible for providing support to growers by helping with operations of seed equipment, planting and seed scouting

Coordination of planning, strategizing, and production of certain seeds for individual companies

Sort, **process & complete numerous** other duties in seed warehouses

Identify new production areas, ensuring production supply all year

JOB OUTLOOK



EDUCATION NEEDED

Bachelor's in agronomy, plant science or related field

SEED

RECOMMENDED H.S. COURSES

Ag education, a focus on science (biology, chemistry, botany), mathematics, business

TYPICAL EMPLOYERS

Seed production companies, biotechnology companies, government, universities, cooperatives, research firms



Soil Scientist

JOB OVERVIEW

Analyze characteristics of soil, the different soil types, and research the ability to survive in different conditions

Study soil structure, properties, chemical compensations, and different stages of soil transformation

Investigate responses of soils to known management practices

Provide advice on rural or urban land use

JOB OUTLOOK



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EDUCATION NEEDED

Bachelor's in Chemistry, Crop or Soil Science, or related field. Researchdriven positions may require Master's degree.

RECOMMENDED H.S. COURSES

A focus on science (earth science, chemistry, biology), mathematics, physics

TYPICAL EMPLOYERS

Conservation organizations, universities or colleges



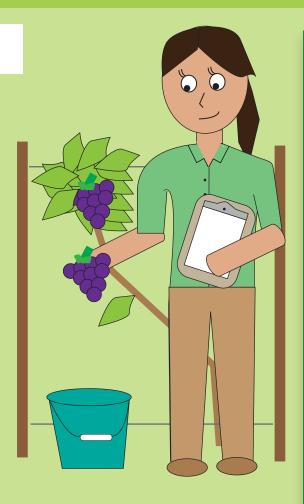
Viticulturist

JOB OVERVIEW

Research & implement findings to better help grape vines produce grapes of high quality and amount for making wine

Preparation of land, planting, trellising, pruning, monitoring and controlling of pests & diseases, fertilizing, irrigation, and canopy management

Understand optimum ripeness and proper harvesting of grapes



EDUCATION NEEDED

Bachelor's/Master's in viticulture, enology, or horticulture

RECOMMENDED H.S. COURSES

Ag education, biology, chemistry, physics, mathematics

TYPICAL EMPLOYERS

Wine farms or estates, wine production companies, government agencies, colleges or universities, or may be self-employed

JOB OUTLOOK

POOR FAIR GOOD GREAT EXCELLENT



Arborist

JOB OVERVIEW

Responsible for well-being of trees

Plant, grow, maintain & remove trees

Collect data on size, age, health of trees

Identify detrimental insects or plant disease and eliminate them

Operate a variety of mechanical equipment

JOB OUTLOOK

POOR FAIR GOOD GREAT EXCELLENT



EDUCATION NEEDED

Bachelor's in arboriculture, urban forestry, or related field

RECOMMENDED H.S. COURSES

Ag education, botany, biology, ecology, earth science, geography

TYPICAL EMPLOYERS

Greenhouses, nurseries, logging firms, landscaping companies, government agencies, residential communities, paper and packaging companies



. TOP AGRICULTURAL CAREERS IN .

AG BIOTECHNOLOGY



Bioinformatics Scientist

JOB OVERVIEW

Use technology and computer science to study and find solutions in biology

Build innovative frameworks for data integration and automated data mining

Apply computer tools to transform genomics data into higher yielding crops and pest control solutions

Use databases of genetic info to find ways to indentify and treat diseases

JOB OUTLOOK





bioinformatics, computational biology or a similar field

RECOMMENDED H.S. COURSES

Ag education, biology, chemistry, physics, computer courses, mathematics

TYPICAL EMPLOYERS

Research firms or human health, biotechnology and crop sciences companies



Marine Biologist

JOB OVERVIEW

Design controlled laboratory & natural field experiments

Observe marine wildlife & organisms in their natural habitats

Collect water, mineral & plant samples to test in laboratory

Dissect & preserve marine life for future studies

Monitor environmental pollution & create plans to notify government officials

JOB OUTLOOK

POOR FAIR GOOD GREAT EXCELLENT

EDUCATION NEEDED

Bachelor's or Master's in Marine Biology or a closely related field

RECOMMENDED H.S. COURSES

Ag education, biology, earth science, mathematics

TYPICAL EMPLOYERS

Aquaculture farms, government agencies, universities, zoos, aquariums, research firms



Microbiologist

JOB OVERVIEW

Examine bacteria, fungi, viruses and other parasites to see how they grow and interact with their environment

Isolate & make cultures of bacteria and other microorganisms

Conduct tests on food and water samples to detect harmful microorganisms

Prepare reports regarding findings on disease outbreaks and clinical trials

JOB OUTLOOK



EDUCATION NEEDED

Doctorate degree in microbiology; lab experience is helpful

RECOMMENDED H.S. COURSES

Ag education, biology, chemistry, animal science, physics, mathematics, English

TYPICAL EMPLOYERS

Universities, research firms, government agencies, animal health companies



Molecular Biologist

JOB OVERVIEW

Examine genetics, gene variation and relationships between them

Develop new methods to diagnose & treat diseases

Detect & identify environmental pollutants

Genetically engineer & test new crops

Grow bacteria in order to determine product effectiveness

Design & execute experiments

JOB OUTLOOK



EDUCATION NEEDED

Bachelor's, Master's or Doctorate in a life science with a concentration in molecular biology

RECOMMENDED H.S. COURSES

Ag education, biology, chemistry, physics, mathematics

TYPICAL EMPLOYERS

Research firms, government agencies, hopsitals, universities, pharmaceutical companies



Nematologist

JOB OVERVIEW

Study nematodes and their interaction with plants

Isolate, mount, count and identify nematode, soil and plant specimens

Develop microbial nematicide products including soil applications and seed treatments

Determine the mode of action of nematicides including indirect and direct effects

Look at nematode resistant genes that could be incorporated in crops

JOB OUTLOOK



EDUCATION NEEDED

Bachelor's in biology, entomology or ecology

RECOMMENDED H.S. COURSES

Ag education, biology, horticulture, chemistry, mathematics, environmental sciences

TYPICAL EMPLOYERS

Universities, seed and chemical companies, government agencies



Plant Biologist

JOB OVERVIEW

Conduct and support research on plant production, breeding and genetics

Build innovative frameworks for data integration and automated data mining

Apply computer tools to transform genomics data into higher yielding crops and pest control solutions

Use databases of genetic info to find ways to indentify and treat diseases

JOB OUTLOOK



EDUCATION NEEDED

Bachelor's or Master's in botany, horticulture, plant pathology, weed science or agronomy

RECOMMENDED H.S. COURSES

Ag education, biology, chemistry, foreign language, mathematics

TYPICAL EMPLOYERS

Biotechnology companies, universities and government agencies



Plant Geneticist

JOB OVERVIEW

Conduct research to understand, improve or create new varieties of plants or crops

Look at a plant's DNA to examine ways to improve shape, size, production level, pesticide and disease tolerance

Cross breed plants to breed new subjects for trials and to build a seed bank

Identify genes responsible for certain plant features and functions

JOB OUTLOOK



EDUCATION NEEDED

Bachelor's, Master's or Doctorate in biology, botany or biochemistry

RECOMMENDED H.S. COURSES

Ag education, biology, chemistry, mathematics

TYPICAL EMPLOYERS

Seed and chemical companies, universities, non-profit companies, research firms



Plant Pathologist

JOB OVERVIEW

Study the health of plants; identify diseases, pests and other health problems plants may experience

Perform tissue sampling, mechanical inoculation and bioassays

Perform complex data analysis to using parametric and non-parametric statistical models

Design & implement new screening methods and platforms for existing or emerging diseases

JOB OUTLOOK



EDUCATION NEEDED

Bachelor's, Master's or Doctorate in botany, horticulture, plant pathology or biology

RECOMMENDED H.S. COURSES

Ag education, biology, chemistry, horticulture, environmental science, mathematics

TYPICAL EMPLOYERS

Seed research & biotech companies, government agencies, universities



Regulatory Scientist | Specialist

JOB OVERVIEW

Responsible for the management and strategy of a product through the regulatory process

Conduct studies and communicate findings to regulatory agencies to ensure crop and chemical safety

Apply computer tools to transform genomics data into higher yielding crops and pest control solutions

Use databases of genetic info to find ways to indentify and treat diseases

JOB OUTLOOK



EDUCATION NEEDED

Bachelor's in plant biology, genetics, biochemistry or related field; knowledge of ag law may also be required

RECOMMENDED H.S. COURSES

Ag education, biology, chemistry, mathematics

TYPICAL EMPLOYERS

Biotechnology and breeding companies, government agencies, universities



Zoologist

JOB OVERVIEW

Study behavior of animals and wildlife as well as diseases and genetics

Analyze and collect potential pollutants from animal habitats

Disect and perform autopsies on deceased animals

May conduct animal education courses or workshops

Care for animals under your study by feeding, medicating and cleaning



EDUCATION NEEDED

Bachelor's or Master's in zoology, biology or ecology

RECOMMENDED H.S. COURSES

Ag education, biology, chemistry, anatomy, animal science, natural resources, mathematics

TYPICAL EMPLOYERS

Zoos, wildlife centers and parks, aquariums, conservation groups, research firms, government agencies, universities

JOB OUTLOOK

POOR FAIR GOOD GREAT EXCELLENT

. TOP AGRICULTURAL CAREERS IN .

AG TRANSPORT



Dispatcher

JOB OVERVIEW

Coordinate product shipments & transfers by combining aspects of logistics & customer service

Accept calls from sales staff, customers & other locations for order of materials

Take, process & prepare orders for pickup or delivery

Contact trucking companies to coordinate shipments

Track & report all shipments

JOB OUTLOOK



EDUCATION NEEDED

High school diploma, but an Associate's degree in ag business would be helpful

RECOMMENDED H.S. COURSES

Ag education, mathematics, computer and business courses

TYPICAL EMPLOYERS

Agricultural retailers, cooperatives, animal production companies, feed mills, logistics companies, and other transport businesses



Export Documentation Specialist

JOB OVERVIEW

Support export activities including oversight of commercial documents in accordance with export and record-keeping

Prepare & audit export documentation for vessel shipments & settlements

Process commercial invoice documents by validating data integrity & accuracy

Ensure compliance with export laws and regulations

JOB OUTLOOK



EDUCATION NEEDED

Bachelor's in Logistics, International Studies, or Agricultural Business

RECOMMENDED H.S. COURSES

Ag education, business and computer courses, personal finance, foreign language, mathematics

TYPICAL EMPLOYERS

Agricultural companies that export to other countries, banks, freight forwarders & government agencies



Export Sales Manager

JOB OVERVIEW

Serve as an intermediary between foreign buyers and domestic sellers

Locate international buyers for domestic product manufacturers

Meet with clients to support & grow sales volumes & provide leadership & customer service

Negotiate & monitor export rates & services to reduce operating costs & increase profitability



EDUCATION NEEDED

Bachelor's or Master's in Agricultural Economics, Business, International Business, or Marketing

RECOMMENDED H.S. COURSES

Ag education, business, accounting, computer courses, mathematics, foreign languages

TYPICAL EMPLOYERS

Food production companies, commodity buyers and suppliers

JOB OUTLOOK

POOR FAIR GOOD GREAT EXCELLENT



Fleet Manager

JOB OVERVIEW

Manage a fleet of vehicles that are used by company employees

Schedule use of fleet assets in the most cost-effective manner

Communicate with drivers & mechanics about any complaints

Monitor purchases of inventory parts

Manage records of all aspects of equipment availability and maintenance

JOB OUTLOOK





Associate's degree, preferably in an automotive field

RECOMMENDED H.S. COURSES

Ag education, business and computer courses, mathematics, personal finance

TYPICAL EMPLOYERS

Companies that provide and maintain vehicles employees use, most commonly chemical, seed, and animal production



Port Terminal Manager

JOB OVERVIEW

Plan, administer & review the operations on a port terminal

Optimize resource usage, minimize costs & maintain quality standards

Handle coordination with rail carriers on delivery of product

Manage vessel tug, barge switching, and fleeting operations

Monitor computerized automation systems to ensure that all equipment is operational

JOB OUTLOOK



EDUCATION NEEDED

Bachelor's in engineering, logistics, or business

RECOMMENDED H.S. COURSES

Ag education, computer and business courses, physics, mathematics

TYPICAL EMPLOYERS

Companies or government agencies that ship products internationally or domestically



Shipping Coordinator

JOB OVERVIEW

Manage key relationships and negotiate freight rates with shipping merchants and traders

Execute stevedoring activities

Supervise loading & unloading of shipping vessels

Review orders & available inventory, process order changes/cancellations

Determine most efficient & economical methods of shipping

JOB OUTLOOK



EDUCATION NEEDED

High school diploma, but at least an Associate's degree in logistics is preferred

RECOMMENDED H.S. COURSES

Ag education, business and computer courses, personal finance, foreign language, mathematics

TYPICAL EMPLOYERS

Medium to large scale agricultural companies that regularly ship & receive goods & products



Supply Chain Manager

JOB OVERVIEW

Manage goods, materials, services and/or equipment of either a division of or the entire company

Ensure demand & inventory targets are met by working with operations and supply planning

Undertake major contract negotiations within the approved pricing policy & establish service programs to match company requirements

Audit supply companies

JOB OUTLOOK



EDUCATION NEEDED

Bachelor's in supply chain management or related field; MBA also recommended

RECOMMENDED H.S. COURSES

Ag education, statistics, business, mathematics

TYPICAL EMPLOYERS

Ag companies that produce products in mass quantities (seed, chemical, animal pharmaceutical, food, etc.)



Supply Chain Manager

JOB OVERVIEW

Report & manage physical and book value stock on hand

Ensure that stock figures received are inputted into the company's system to guarantee current stock

Record inventory movement and assign associated value

Ensure that appropriate checks are in place for the payment of storage & handling fees

Work closely with logistics, warehouse, & purchasing

JOB OUTLOOK



EDUCATION NEEDED

High school diploma or Associate's degree in ag business or supply chain management

RECOMMENDED H.S. COURSES

Ag education, business and computer courses, mathematics

TYPICAL EMPLOYERS

Variety of agricultural companies that sells/distributes products & needs tracking on them



Weighbridge/Receivables Associate

JOB OVERVIEW

Handle receivables using electronic data capture systems to weigh & handle products delivered

Spot, connect, load & unload railcars, bulk containers, tank trucks, etc.

Control & adjust the operation of equipment

Ensure safety & regulatory compliance in handling or loading areas

JOB OUTLOOK





EDUCATION NEEDED

High school diploma

RECOMMENDED H.S. COURSES

Ag education, business and computer courses, economics, government, geography, mathematics

TYPICAL EMPLOYERS

Agricultural production companies, crop protection companies, food production companies, cooperatives



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