

Agriculture Career Cards

These career cards were designed to be used with the Ohio State University Signature Program ***Real Money. Real World.***

Less than two percent of people work in traditional production agriculture. These cards represent the wide variety of careers in biotechnology, business, technology, communication and many other agriculture-related jobs. These particular careers were identified by 17 different universities and prioritized by a team of agricultural professionals in Ohio.

For a PowerPoint presentation to accompany these cards, contact Leslie Cooksey, cooksey.25@osu.edu.

For more information, visit realmoneyrealworld.osu.edu.
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THE OHIO STATE UNIVERSITY

COLLEGE OF FOOD, AGRICULTURAL,
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Accountant

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.

Education/training: Bachelor's degree

Salary (Ohio median): \$63,350

Knowledge that is helpful includes:

knowledge of economic and accounting principles and practices, the financial markets, banking and the analysis and reporting of financial data

Skills that are useful include:

listening, reading and math skills

Business Analyst

Ensure 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.

Education/training: Bachelor's degree

Salary (Ohio median): \$78,240

Knowledge that is helpful includes:

knowledge of sales and marketing,
administration and management

Skills that are useful include:

ability to use deductive and inductive reasoning,
read and write clearly

Grain Elevator Manager

Storing grain, shipping grain to processing facilities, and buying grain from farmers.

Education/training: Associate's or more preferably Bachelor's degree in agricultural business, economics, marketing or agronomic related area

Salary (Ohio median): \$56,820

Knowledge that is helpful includes:
math skills, customer and personal services, and a knowledge of transportation methods for ag products

Skills that are useful include:
critical thinking, reasoning and communication skills

Farm Manager

Plan, direct, or coordinate the management or operation of farms or other agricultural establishments. May hire, train, or supervise farm workers. May engage in or supervise planting, cultivating, harvesting, financial, or marketing activities.

Education/training: High school diploma

Salary (Ohio median): \$56,480

Knowledge that is helpful includes:

knowledge of food production, business and management principles, math

Skills that are useful include:

ability to reason and think critically, make decisions, convey information

Aquaculture Manager

Grow, monitor, and maintain fish and shellfish; direct and coordinate activities of workers engaged in fish hatchery production for corporations, cooperatives, or other owners.

Education/training: High school diploma

Salary (Ohio median): \$56,480

Knowledge that is helpful includes:

biology, ag business administration and management

Skills that are useful include:

evaluating and monitoring situations, critical thinking, communication of information

Grain Merchandising/ Commodities Broker

Oversee companies' commodities and are responsible for trading, purchasing, locating, and managing customer accounts for each commodity.

Education/training: Bachelor's degree in ag business

Salary (Ohio median): \$59,990

Knowledge that is helpful includes:
customer and personal service, economics
and accounting

Skills that are useful include:
communication, critical thinking

Insurance Salesperson

Sell ag-related insurance. Select, price and develop coverage terms for farm accounts to achieve profitable underwriting results. May refer clients to independent brokers, work as an independent broker, or be employed by an insurance company.

Education/training: High school diploma

Salary (Ohio median): \$48,460

Knowledge that is helpful includes:
customer and personal service, sales and marketing

Skills that are useful include:
listening, reading, and conveying information

Lending/Finance Analyst

Evaluate, authorize, or recommend approval of commercial, real estate, or credit loans. Advise borrowers on financial status and payment methods. Includes mortgage loan officers and agents, collection analysts, loan servicing officers, and loan underwriters.

Education/training: Bachelor's degree

Salary (Ohio median): \$57,530

Knowledge that is helpful includes:

customer and personal service, economics and accounting

Skills that are useful include:

active listening, conveying information, judgment and decision making

Ag Econ & Business Marketing/ Public Relations Agent

Communicate appropriate message to public, ensure company meets sales goals, watch over promotions for company products and services, develop an influential company brand for clients and employees

Education/training: Bachelor's degree in agricultural business, marketing, journalism, communications, education or business administration

Salary (Ohio median): \$59,510

Knowledge that is helpful includes:
customer and personal service and administration and management

Skills that are useful include:
reading, active listening, complex problem solving

Production/ Management Specialist

Work in a variety of settings within agriculture including animal production, seed and chemical production, and the food sector, oversee day to day activities as they relate to the successful production of the product the company produces.

Education/training: High school diploma

Salary (Ohio median): \$44,240

Knowledge that is helpful includes:

production and processes, distribution,
administration and management

Skills that are useful include:

listening, reading, conveying information

Ag Econ & Business Sales Representative

market products 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.

Education/training: Bachelor's degree in agricultural business or agricultural major that relates to the product you are representing i.e. agronomy, animal, poultry, horticulture, etc.

Salary (Ohio median): \$68,370

Knowledge that is helpful includes:
customer and personal service, sales and marketing

Skills that are useful include:
communication of information, speaking, listening

International Trade/ Logistics Coordinator

Support the international container and vessel trade team with information and documentation for primarily the Asian destination markets. This person will have daily communication with the traders and other international offices to make sure operationally transactions are seamless from origin to destination and shipment deadlines are met.

Education/training: Bachelor's degree

Salary (Ohio median): \$70,000

Knowledge that is helpful includes:
computers, math

Skills that are useful include:
computer skills, organization, communication skills

Ag Education Teacher

Teach occupational, career and technical, or vocational subjects at the secondary school level in public or private schools; establish FFA chapter

Education/training: Bachelor's degree

Salary (Ohio median): \$63,010

Knowledge that is helpful includes:

Understand education and training, a variety of agricultural content: animal and plant science, industrial power/tech, natural resources, food science, horticulture, biotechnology

Skills that are useful include:

instructing and teaching others, active listening, reading comprehension

Communications/ Public Relations Agent

Engage in promoting or creating an intended public image for ag-related groups or organizations. May write or select material for release to various communications media.

Education/training: Bachelor's degree

Salary (Ohio median): \$49,520

Knowledge that is helpful includes:

media production and communication methods, sales and marketing, ag industry

Skills that are useful include:

active listening, speaking, adjusting actions in relation to others' actions

**Ag Education,
Communication & Studies**

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Cooperative Extension Agent

Extension 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.

Education/training: Bachelor's degree

Salary (Ohio median): \$29,055

Knowledge that is helpful includes:

agriculture and natural resources

Skills that are useful include:

instructing and teaching others, public speaking, working with others



Ag Ed/Communications Marketing Specialist

Research market conditions in local, regional, or national areas, or gather information to determine potential sales of a product or service, or create a marketing campaign. May gather information on competitors, prices, sales, and methods of marketing and distribution.

Education/training: Bachelor's degree

Salary (Ohio median): \$59,510

Knowledge that is helpful includes:

marketing strategies, research, budgets

Skills that are useful include:

reading comprehension, active listening,
complex problem solving

**Ag Education,
Communication & Studies**

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Ag Ed/Communications Sales Representative

Sales Representatives for food, seed, feed, and fuel market their certain product to different companies within the agricultural sector including producers, suppliers, and dealers within a certain territory.

Education/training: Bachelor's degree

Salary (Ohio median): \$55,220

Knowledge that is helpful includes:

sales, account handling, product and service knowledge

Skills that are useful include:

working well with others, communicating ideas

Agronomist Soil and Plant Scientists

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.

Education/training: Bachelor's degree

Salary (Ohio median): \$66,360

Knowledge that is helpful includes:

ag ed, biology, chemistry, computers, mathematics

Skills that are useful include:

data evaluation and analysis, communication

Crop Scout/Consultant

A crop scout inspects farmers' fields and records weed, insect, disease and other observations. This is an important role to help farmers make timely, informed and economical field crop decisions.

Education/training: Training offered by local extension office or ag retailer

Salary (Ohio median): \$35,134

Knowledge that is helpful includes:

ag ed, math, English, biology, chemistry, environmental science

Skills that are useful include:

identifying weeds, pests, growth stages

Precision Ag Specialist

Apply geospatial technologies, including geographic information systems GIS and GPS, to agricultural production or management activities. May use computers to develop or analyze maps or remote sensing images to compare physical topography with data on soils, fertilizer, pests, or weather.

Education/training: Associate's degree

Salary (Ohio median): \$46,170

Knowledge that is helpful includes:

computers; electronics; techniques for planting, growing, and harvesting food

Skills that are useful include:

analyzing information, maps, data; communication

**Agronomy and
Crop Sciences**

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Agronomy/Crop Sciences Research Technician

Set up or maintain laboratory equipment and collect samples from crops or animals. Prepare specimens or record data to assist scientists in biology or related life science experiments.

Education/training: Associate's degree

Salary (Ohio median): \$37,200

Knowledge that is helpful includes:

math, biology, chemistry

Skills that are useful include:

lab techniques, good vision, written and oral comprehension of information

Equine Trainer

A horse trainer or instructor works with horses to ready them for riders, races or shows. Train animals for riding, harness, security, performance, or obedience, or assisting persons with disabilities. Accustom animals to human voice and contact and condition animals to respond to commands. Train animals according to prescribed standards for show or competition. May train animals to carry pack loads or work as part of pack team.

Education/training: High school diploma

Salary (Ohio median): \$21,210

Knowledge that is helpful includes:
customer and personal service, education, psychology

Skills that are useful include:
instructing, problem sensitivity, learning strategies

Feed/Nutrition Supervisor

Coordinating production in animal feed industry, taking the forefront in safety and quality, employee engagement and compliance with regulatory needs.

Education/training: Bachelor's degree

Salary (Ohio median): \$47,581

Knowledge that is helpful includes:
computer, science

Skills that are useful include:
teamwork, safety awareness, customer service,
organization

Food Industry Technician

Responsible for improving and maintaining product efficiency, visiting multiple dairies to make sure client's milk quality is in top performance, using correct chemical levels, check systems, milk prep procedures, etc.

Education/training: Bachelor's degree in dairy science or food science

Salary (Ohio median): \$34,991

Knowledge that is helpful includes:
food handling, food plant maintenance

Skills that are useful include:
monitoring, assessment, communication, decision making

Herdsman

Attend to live farm or ranch animals that may include cattle, sheep, swine, goats, horses and other equines. Attend to animals produced for animal products, such as meat, fur and skins. Duties may include feeding, watering, herding, grazing, castrating, branding, weighing, catching, and loading animals. May maintain records on animals and examine animals to detect diseases and injuries, assist in birth deliveries and administer medications, vaccinations, or insecticides as appropriate. May clean and maintain animal housing areas.

Education/training: High school diploma

Salary (Ohio median): \$22,920

Knowledge that is helpful includes:

biology, administration, management,
customer and personal service

Skills that are useful include:

control precision, problem sensitivity, critical thinking,
monitoring

Poultry Industry Graders

Grade, sort, or classify unprocessed food and other agricultural products by size, weight, color, or condition.

Education/training: High school diploma

Salary (Ohio median): \$29,730

Knowledge that is helpful includes:

public safety, production and processing,
food production

Skills that are useful include:

active listening, monitoring, dexterity, category flexibility

Animal/Dairy Sciences Research Technician

Perform medical tests in a laboratory environment for use in the treatment and diagnosis of diseases in animals. Prepare vaccines and serums for prevention of diseases. Prepare tissue samples, take blood samples, and execute laboratory tests, such as urinalysis and blood counts. Clean and sterilize instruments and materials and maintain equipment and machines. May assist a veterinarian during surgery.

Education/training: Associate's degree

Salary (Ohio median): \$21,230

Knowledge that is helpful includes:
customer and personal service, biology

Skills that are useful include:
active listening, critical thinking, deductive reasoning

Animal/Dairy Sciences Sales Representative

Feed and Animal Health Sales Representatives are responsible for the selling of products that are manufactured by the company that they work for. They also service the products within the animal sector of agriculture.

Education/training: Bachelor's degree in animal science or ag business

Salary (Ohio median): \$55,250

Knowledge that is helpful includes:
ag ed, animal science, biology

Skills that are useful include:
communication, active listening, math

Swine Farm Manager

A sow farm manager oversees all aspects of a sow 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.

Education/training: Associate's or Bachelor's degree in any livestock animal agriculture related field.

Salary (Ohio median): \$56,480

Knowledge that is helpful includes:
food production, administration and management

Skills that are useful include:
deductive and inductive reasons, problem sensitivity, critical thinking

Biological Sciences Lab/ Research Technician

Examine animals and specimens to detect the presence of disease or other problems. Feed livestock or laboratory animals. Measure or weigh compounds and solutions for use in testing or animal feed. Conduct or supervise operational programs such as fish hatcheries, greenhouses and livestock production programs. May work under the supervision of a medical technologist.

Education/training: Bachelor's degree

Salary (Ohio median): \$38,920

Knowledge that is helpful includes:
biology, chemistry

Skills that are useful include:
information ordering, active listening, critical thinking

Molecular and Cellular Biologist

Conduct research on plant or animal cell organization and function, including genetic expression and/or cellular bioinformatics. Compile and analyze cellular experimental data. Adjust experiment design. Maintain lab records and data. Conduct research aimed at improvements in areas such as disease testing and crop quality.

Education/training: Bachelor's and/or master's degree

Salary (Ohio median): \$68,540

Knowledge that is helpful includes:
biology, chemistry

Skills that are useful include:
science, reading comprehension, critical thinking

Wildlife Biologist/Technician

Study the origins, behavior, diseases, genetics, and life processes of animals and wildlife. May specialize in wildlife research and management. May collect and analyze biological data to determine the environmental effects of present and potential use of land and water habitats.

Education/training: Bachelor's degree

Salary (Ohio median): \$56,980

Knowledge that is helpful includes:

biology, math, science

Skills that are useful include:

active listening, critical thinking, communication

**Environmental Sciences, Fisheries,
Forestry and Wildlife Biology**

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Government/Private Forestry Technician

Provide technical assistance regarding the conservation of soil, water, forests, or related natural resources.

May compile data pertaining to size, content, condition, and other characteristics of forest tracts, under the direction of foresters or train and lead forest workers in forest propagation, fire prevention and suppression. May assist conservation scientists in managing, improving, and protecting rangelands and wildlife habitats.

Education/training: Associate's degree

Salary (Ohio median): \$40,650

Knowledge that is helpful includes:

transportation, geography, conservation

Skills that are useful include:

critical thinking, deductive reasoning, active listening

**Environmental Sciences, Fisheries,
Forestry and Wildlife Biology**

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Environmental Consultant

Collaborate with field and biology staff to oversee the implementation of environmental protection projects and to develop new products. Process and synthesize complex scientific data into practical strategies for restoration, monitoring or management.

Education/training: Bachelor's degree

Salary (Ohio median): \$65,920

Knowledge that is helpful includes:

biology, geography, science

Skills that are useful include:

deductive and inductive reasoning, critical thinking

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Environmental Technician

Perform laboratory and field tests to monitor the environment and investigate sources of pollution, including those that affect health, under the direction of an environmental scientist, engineer, or other specialist. May collect samples of gases, soil, water, and other materials for testing.

Education/training: Associate's degree

Salary (Ohio median): \$39,520

Knowledge that is helpful includes:

biology, law and government

Skills that are useful include:

communication, critical thinking

**Environmental Sciences, Fisheries,
Forestry and Wildlife Biology**

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Food Science Production Technician

Perform standardized qualitative and quantitative tests to determine physical or chemical properties of food or beverage products. Maintain records of testing results or other documents as required by state or other governing agencies. Taste or smell foods or beverages to ensure that flavors meet specifications or to select samples with specific characteristics. Monitor and control temperature of products.

Education/training: Associate's degree

Salary (Ohio median): \$37,200

Knowledge that is helpful includes:
production, processing, chemistry

Skills that are useful include:
listening, reading, communication, reasoning

**Food Science,
Human Nutrition**

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Quality Assurance/ Control Technician

Conduct tests to determine quality of raw materials, bulk intermediate and finished products. Ensure that lab cleanliness and safety standards are maintained. Identify quality problems and recommend solutions.

Education/training: Associate's degree

Salary (Ohio median): \$46,170

Knowledge that is helpful includes:
chemistry, math, nutrition

Skills that are useful include:
quality control analysis, active listening, communication

**Food Science,
Human Nutrition**

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Food Science Researcher & Developer

Use chemistry, microbiology, engineering, and other sciences to study the principles underlying the processing and deterioration of foods analyze food content to determine levels of vitamins, fat, sugar, and protein discover new food sources research ways to make processed foods safe, palatable, and healthful and apply food science knowledge to determine best ways to process, package, preserve, store, and distribute food.

Education/training: Bachelor's degree in food science, nutrition, food engineering

Salary (Ohio median): \$54,540

Knowledge that is helpful includes:

ag ed, biology, chemistry, math

Skills that are useful include:

active listening, observation, communication

**Food Science,
Human Nutrition**

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Golf Course Superintendent

Golf Course Superintendents are responsible for overseeing golf course management, maintenance and operations.

Education/training: Bachelor's degree

Salary (Ohio median): \$42,360

Knowledge that is helpful includes:

ag ed, biology, chemistry, math

Skills that are useful include:

inspection and oversight, monitoring, communication

Landscape Designer

Plan and design land areas for projects such as parks and other recreational facilities, airports, highways, hospitals, schools, land subdivisions, and commercial, industrial, and residential sites.

Education/training: Bachelor's degree

Salary (Ohio median): \$57,280

Knowledge that is helpful includes:
design, building and construction

Skills that are useful include:
active listening, coordination with others,
visualization of finished work

Landscape Installation/ Maintenance Worker

Landscape or maintain grounds of property using hand or power tools or equipment. Workers typically perform a variety of tasks, which may include any combination of the following sod laying, mowing, trimming, planting, watering, fertilizing, digging, raking, sprinkler installation, and installation of mortarless segmental concrete masonry wall units.

Education/training: No formal educational credential

Salary (Ohio median): \$23,410

Knowledge that is helpful includes:
customer service, chemistry, horticulture

Skills that are useful include:
strength, coordination, dexterity

Elevator Manager

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

Education/training: Bachelor's degree

Salary (Ohio median): \$56,820

Knowledge that is helpful includes:

math, customer and personal service, transportation

Skills that are useful include:

ability to listen well and communicate clearly,
deductive reasoning



General Engineer

Design, develop, test, and evaluate integrated systems for managing ag industrial production processes, including human work factors, quality control, inventory control, logistics and material flow, cost analysis, and production coordination.

Education/training: Bachelor's degree

Salary (Ohio median): \$76,680

Knowledge that is helpful includes:
engineering and technology, production and processing, math

Skills that are useful include:
oral comprehension and expression,
written comprehension



Tech/Biosystems Design Engineer

Development of product including prototype building and testing of tools and farm machinery. Develop CAD models and drawings to meet new requirements. Provide product support, quality, and marketing.

Education/training: Bachelor's degree

Salary (Ohio median): \$80,000

Knowledge that is helpful includes:

administration, management, customer and personal service, human resources

Skills that are useful include:

active listening, coordination and monitoring of personnel, problem sensitivity



Packaging Engineer

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

Education/training: Bachelor's degree

Salary (Ohio median): \$84,560

Knowledge that is helpful includes:
engineering, technology, production, processing, design

Skills that are useful include:
active listening, problem solving, decision making

Technical & Biosystems Engineering,
Industrial Tech and Packaging Services

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Production Manager

Plan, direct, or coordinate the management or operation of farms, ranches, greenhouses, aquacultural operations, nurseries, timber tracts, or other agricultural establishments. May hire, train, or supervise farm workers or contract for services to carry out the day-to-day activities of the managed operation. May engage in or supervise planting, cultivating, harvesting, financial, or marketing activities.

Education/training: High school diploma

Salary (Ohio median): \$56,480

Knowledge that is helpful includes:

food production, math, administration and management

Skills that are useful include:

critical thinking, decision making, deductive/
inductive reasoning



Tech/Biosystems Engineering Biofuels Engineer

Develops and scales microbiological-based products and processes in which fermentation of agricultural feedstocks and biofuels processed from fermentations of ethanol, hydrogen, microbial oils, and methane are converted into clean energy.

Education/training: Bachelor's degree in engineering

Salary (Ohio median): \$123,700

Knowledge that is helpful includes:
science, engineering, research and development

Skills that are useful include:
decision-making, analysis, deductive reasoning



Tech/Biosystems Engineering Sales Representative

Sell business goods or services, the selling of which requires a technical background equivalent to a baccalaureate degree in engineering.

Education/training: Bachelor's degree

Salary (Ohio median): \$93,040

Knowledge that is helpful includes:

sales, marketing, customer service,
computers and electronics

Skills that are useful include:

persuasion, good communication

Technical & Biosystems Engineering,
Industrial Tech and Packaging Services

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Technical Support Specialist

Provide technical assistance to users in the ag industry. Answer questions or resolve computer problems for clients in person, or via telephone or electronically. May provide assistance concerning the use of computer hardware and software, including printing, installation, word processing, electronic mail, and operating systems.

Education/training: Bachelor's degree

Salary (Ohio median): \$42,960

Knowledge that is helpful includes:
computers, electronics, technology, customer service

Skills that are useful include:
active listening, ability to communicate information and instruct others



Precision Ag Specialist

Apply geospatial technologies, including geographic information systems GIS and GPS, to agricultural production or management activities. May use computers to develop or analyze maps or remote sensing images to compare physical topography with data on soils, fertilizer, pests, or weather.

Education/training: Associate's degree

Salary (Ohio median): \$46,170

Knowledge that is helpful includes:

computers; electronics; techniques for planting, growing, and harvesting food

Skills that are useful include:

analyzing information, maps, data; communication

