



The production, processing, marketing, distribution, financing, and development of agricultural commodities and resources including food, fiber, wood products, natural resources, horticulture, and other plant and animal products/resources.



This is a sample of the Cluster and Pathway Model located at <http://www.okcareertech.org/guidance>. Select Career and Pathway Models; click on "Cluster Icon."

Sample Career Specialties / Occupations	<ul style="list-style-type: none"> Agricultural Communications Specialists Agricultural Salespersons Bacteriologists Biochemists + Biochemists-Nutritionists-Dieticians Bioengineers Business-Educators ❖ Cheese Makers Field Workers Food and Drug Inspectors Food and Fiber Engineers Food Brokers-Food Inspectors Food Meal Supervisors Food Processors + Food Scientists ❖ Meat Cutters-Meat Graders Meat Processors-Toxicologists Meat Science Researchers Microbiologists Produce Buyers ❑ Quality Control Specialists Storage Supervisors 	<ul style="list-style-type: none"> + Agricultural Educators Agricultural Journalists Aquaculturalists Bioinformatics Specialists Biotechnology Lab Technicians Botanists Commodity Marketing Specialists Crop Farm Managers Custom Hay/Silage Operators + Education & Extension Specialists ❑ Farmers Forest Geneticists ❑ Forestry Workers Golf Course Superintendents Grain Operations Superintendents Greenhouse Managers Growers Horticulturalist Landscape Architect ❑ Lumber Production Workers ❖ Nursery Workers Plant Breeders and Geneticists Plant Pathologists Ranchers Sales Representatives + Soil & Water Specialists Tree Surgeons 	<ul style="list-style-type: none"> + Agricultural Educators AI Technicians-Aquaculturalists ❖ Animal Caretakers-Poultry Managers Animal Health Salespersons Animal Nutritionists Animal Scientists Dairy Producers Embryo Technologists Embryo Transfer Technicians Equine Managers-Veterinarians Feed Sales Representatives Feed Sales Specialists ❖ Fishermen/Hunters/Trappers Livestock Buyers Livestock Geneticists Livestock Inspectors Livestock Producers Meat Science Researchers Pet Shop Operators + Reproductive Physiologists USDA Inspectors ❑ Veterinary Assistants-Feedlot Specialists Vivarian Technicians + Wildlife Biologists 	<ul style="list-style-type: none"> Agricultural Applications SoftwareDevelopers/Programmers + Agricultural Engineers Agricultural Extension Engineering Specialists Communication Technicians Computer Service Technical Support Technicians Database Administrators Electronics Systems Technicians Equipment/Parts Managers ❖ Farm Equipment Mechanics GPS Technicians ❑ Heavy Equipment Maintenance Technicians Information Lab Specialists Machine Operators Machinists Recycling Technicians Remote Sensing Specialists Waste Water Treatment Plant Operators ❖ Welders 	<ul style="list-style-type: none"> Cartographers ❖ Commercial Fishermen + Ecologists Environmental Interpreters + Fish and Game Officers Fish Hatchery Managers Fisheries Technicians ❖ Fishing Vessel Operators Forest Technicians Geologists Hydrologists ❑ Log Graders Loggers Mining Engineers Park Managers Pulp and Paper Managers + Range Technicians Soil Geology Technicians Vessel Crew Water Monitoring Technicians Wildlife Managers 	<ul style="list-style-type: none"> + Environmental Compliance Assurance Managers Environmental Sampling and Analysis Scientists/Technicians ❖ Hazardous Materials Handlers Hazardous Materials Technicians/Managers Health and Safety Sanitarians Pollution Prevention and Control Managers Pollution Prevention and Control Technicians Solid Waste Disposers/Recyclers Solid Waste Managers Solid Waste Specialists Solid Waste Technicians Toxicologists ❑ Waste Water Managers Water Environment Managers Water Quality Managers 	<ul style="list-style-type: none"> Ag Lenders Agricultural Chemical Dealers Agricultural Commodity Brokers Agricultural Economists Agricultural Products Buyers Animal Health Products Distributors Bankers/Loan Officers Chemical Sales Representatives Dairy Herd Supervisors (DHIA) Farm Investment Managers ❑ Farm Managers Farmers/Ranchers/Feedlot Operators ❑ Feed and Supply Store Managers Field Representatives for Banks, Insurance Companies or Government Programs Field Service Representatives Livestock Ranchers/Breeders Livestock Sellers Produce Commission Agents Sales Managers ❖ Salespersons
Pathways	<p>Food Products and Processing Systems (Food Processing and Preserving, Packaging, Distribution, Government Monitoring and Regulation)</p>	<p>Plant Systems (Agronomic, Horticulture, Forestry, Turf, Viticulture, Soils, etc.)</p>	<p>Animal Systems (Large Animals, Small Animals, Wildlife Animals, and Research Animals)</p>	<p>Power, Structural and Technical Systems (Power, Structures, Controls, Geospatial Technology, Computer Systems, Electronics, Hydraulics, Pneumatics, etc.)</p>	<p>Natural Resources Systems (Habitat Conservation, Forest Products, Parks and Recreation, Mining, Environmental Services, Fisheries, Soil Conservation, etc.)</p>	<p>Environmental Service Systems (Pollution Prevention, Water and Air Quality, Hazardous Materials, Solid Waste Management, Health and Safety Sanitation, etc.)</p>	<p>Agribusiness Systems (Sales, Service, Farm and Ranch Management, Entrepreneurship, Economics, etc.)</p>
Cluster K&S	<p>Cluster Knowledge and Skills</p> <ul style="list-style-type: none"> <li style="width: 50%;">• Academic Foundations <li style="width: 50%;">• Information Technology <li style="width: 50%;">• Safety, Health, and Environment <li style="width: 50%;">• Communications <li style="width: 50%;">• Leadership and Teamwork <li style="width: 50%;">• Systems <li style="width: 50%;">• Employability and Career Development <li style="width: 50%;">• Problem Solving and Critical Thinking <li style="width: 50%;">• Technical Skills <li style="width: 50%;">• Ethics and Legal Responsibilities 				<p>Education Needed for Career</p> <ul style="list-style-type: none"> ❖ High School – completed high school, high school with career and technology training, GED, on-the-job training, or apprenticeship ❑ Junior College – completed junior/community college, postsecondary technical, or career and technology training + Baccalaureate Degree – completed four-year degree or more 		