



Activity 1.2.2 Agriscience Careers and Me

Purpose

Science and technology are instrumental for producing and processing of food, fiber, and renewable natural resources, and are the basis for many careers in agriculture. Studying agriscience careers may help you identify an agriscience career right for you and guide you to the appropriate training and experience necessary for a successful and rewarding career.

An estimated 300 different careers await you if you chose a profession in the field of agriculture. There is a need for approximately 400,000 people to fill positions in agriscience careers each year. Of those positions, there are typically only 100,000 filled by people who are educated and trained in agriscience. The remaining openings go to people who are trained in fields outside of agriculture. Openings in agriscience include areas such as mechanics, sales, genetic engineering, nutrition, and extension.

Materials

Per student:

Computer with Internet access

Pencil

Agriscience Notebook

In this activity, you will explore the career opportunities awaiting you in the fields of agriculture and natural resources. First, you will need to access the www.careerwise.mnscu.edu website.

Part One – Careers in Agriculture

1. Go to www.careerwise.mnscu.edu.
2. Select **Explore Careers** at the top left of the screen.
3. Under **Research Careers**, select **Career Clusters and Pathways**.
4. Click on **Career Clusters** and then select **Agriculture, Food, and Natural Resources** from the choices in the center.
5. Read the introductory paragraph and select **Pathways in this cluster**.
6. Within the AFNR cluster, you will see seven career pathways. Take some time to explore each pathway by clicking on the pathway. On *Activity 1.2.2 Student Worksheet*, record the following information for each pathway in Table 1.
 - Brief overview
 - Interesting careers
 - Education requirements

Part Two – Finding Your Interests

1. At the top menu, select **Assess Yourself**.
2. Next select **Take an Assessment**.
3. Select **Interest Assessment**.
4. Read the information about the Interest Assessment and then select **Get Started**.

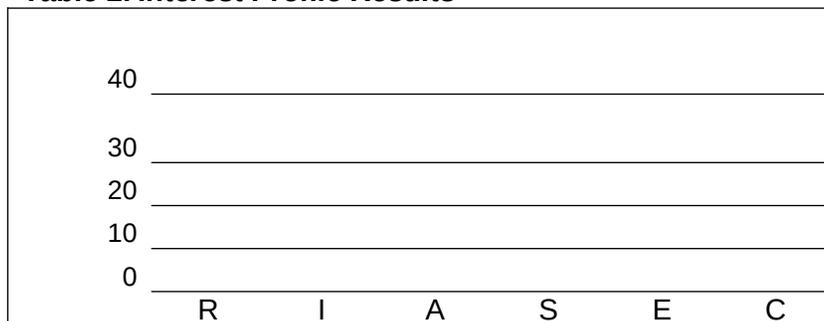
Activity 1.2.2 Student Worksheet

Table 1. Agriculture Pathways

Pathways	Overview	Careers	Education Requirements
Agribusiness Systems Pathway	The agribusiness systems pathway includes occupations involved in the coordination of all activities that contribute to the production, processing, marketing, distribution, financing and development of agricultural commodities, plant and animal products, and other natural resources.	farm labor contractor	high school diploma
Animal Systems Pathway	The animal systems pathway includes occupations related to the raising and caring of animals and developing more efficient ways of producing and processing meat, poultry, eggs and dairy products. Workers study genetics, nutrition, reproduction, growth and care of domesticated farm animals. Includes workers who provide medical service to farm and nonfarm animals.	animal scientists, biochemists, veterinarians	advance degree (4 years)
Environmental Service Systems Pathway	The environmental service systems pathway includes occupations involved in water and air pollution control, recycling, waste disposal and public health issues. Work includes hazardous-waste management, research, and quality control.	Environmental Engineers, occupational Health and Safety Specialists,	bachelor degree (4 years)
Food Products and Processing Systems Pathway	The food products and processing systems pathway includes occupations involved in bulk food production, the discovery of new food sources, the analysis of food content, and the development of ways to process, preserve, package or store food according to consumer needs, and. Includes those who monitor compliance with industry and government regulations.	Food Scientists, Validation Engineers	bachelor degree (4 years)
Natural Resources	The natural resources systems pathway	Geoscientists, Hydrologists,	advance degree (4 years)

Systems Pathway	includes occupations that develop, use, maintain, manage, and analyze natural resources. Includes catching and trapping various types of marine life. Work might relate to recreation, wildlife, conservation, mining, logging, or oil drilling.	Natural Sciences Managers	
Plant Systems Pathway	The plant systems pathway includes occupations related to growing food, feed, and fiber crops, and the study of plants and their growth to help producers meet consumer demand while conserving natural resources and maintaining the environment. Work might include nutritional analysis or genetic engineering.	Conservation Scientists, Soil and Plant Scientists	bachelor degree (4 years)
Power, Structural, and Technical Systems Pathway	Power, structural, and technical systems workers apply knowledge of engineering, hydraulics, pneumatics, electronics, power, structures, and controls to the field of agriculture. They design agricultural structures as well as machinery and equipment.	Agricultural Engineers	bachelor degree (4 years)

Table 2. Interest Profile Results



R = Realistic	Total: 38
I = Investigative	Total: 27
A = Artistic	Total: 21
S = Social	Total: 15
E = Enterprising	Total: 30
C = Conventional	Total: 25

Top Letter: R

Second Letter: E

Third Letter: I

Table 3. My Career Options

Architectural and Engineering Managers	Environmental Scientists	Industrial Engineers
Evaluate environmental impact of operational or development activities. Identify environmental concerns. Evaluate energy production data. Model operational processes.	Conduct climatological research. Conduct research of processes in natural or industrial ecosystems. Conduct research on social issues. Monitor environmental impacts of production or development activities.	Investigate safety of work environment. Research human performance or health factors related to engineering or design activities. Estimate technical or resource requirements for development or production projects. Estimate time requirements for development or production projects.

Table 4. My College Major Interests

Business Administration, Management and Operations	Major: Ecology, Evolution, Systematics, and Population Biology	Major: Geological and Earth Sciences/Geosciences
Business administration, management and operations programs prepare students to plan, organize, direct, and control the functions and processes of a business or organization.	Ecology, evolution, systematics, and population biology programs focus on the scientific study of the relationships and interactions of small-scale biological systems.	Geological and earth sciences/geosciences programs focus on the scientific study of the earth; the forces acting upon it; and the behavior of the solids, liquids and gases comprising it.