

 **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.minnstate.edu website.

Part One – Careers in Agriculture

1. Go to www.careerwise.minnstate.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

Conclusion

1. Which of the pathways reviewed in Part One interests you the most?

Technical systems pathway

2. How did your interests relate to the careers and majors you selected?

Environmental engineering

3. List three characteristics that make the careers you chose appealing to you.

The pay is good, and I like working with technology.

Activity 1.2.2 Student Worksheet

Table 1. Agriculture Pathways

Pathways	Overview	Careers	Education Requirements
Careers in 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 Agricultural Equipment Operators Farm Equipment Mechanics	Bachelor's degree High school Vocational training
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.	College Agricultural Sciences Teachers Farmers and Ranchers	Graduate degree (any type) High School
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 and Biophysicists	Bachelor's degree Graduate degree (any type)
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 Scientists Environmental Science Technicians	Bachelor's degree High school
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.	Agricultural Graders and Sorters Agricultural Inspectors Agricultural and Food Science Technicians	High School Associate degree Bachelor's degree
Natural Resources	The natural resources systems pathway includes	Geoscientists	Bachelor's degree

Systems Pathway	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.	Hydrologists Natural Sciences Managers	Bachelor's degree Bachelor's degree
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.	Farmers and Ranchers Conservation Scientists Farmworkers and Laborers	High School Bachelor's degree High School