

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?

To be honest I didn't find anything that stood out and or interested me

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

They didn't really. I couldn't find a career that was somewhat similar to what I'm interested in terms of any kind of biological science field.

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

Science related

Research related

Basic fieldwork skills

Activity 1.2.2 Student Worksheet

Table 1. Agriculture Pathways

Pathways	Overview	Careers	Education Requirements
Agribusiness systems	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 and home management advisors, Wholesale and manufacturing sales reps, Farmers and Ranchers etc..	Highschool Diploma or higher
Animal systems	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 trainer, non farm animal caretaker and veterinary assistants	Less than one year of college and high school diploma
Environmental service systems	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.	Pest control workers, Environmental engineers and Environmental scientists	1-3 years + of college
Food products and processing systems	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 batch makers, food cooking and machine operators and Meat, poultry and fish cutters	Highschool diploma
Natural resource systems	The natural resources 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,	Extraction worker helpers, hunters and trappers, mine shuttle car operators	Highschool diploma

	logging, or oil drilling.		
Plant systems	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 and farmers and ranchers	4-4+ years of college
Power structural and technical systems	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.	Farm equipment mechanics, mobile heavy equipment mechanics and, agricultural engineers	1-4 years of college