Course: 01.421 Agriculture Mechanics Technology

Unit 7: Maintenance of Agricultural Machinery, Equipment, and Tractors

Lesson 1: Exploring Careers in the Agricultural Machinery Industry

QCC: 301, 302, 303, 304

Objectives:

1. Describe occupations in Agriculture Machinery Industry.

2. Describe employment skills in Agricultural Power and Machinery occupations.

Teaching Time: Classroom: 2 hours

Laboratory: 1 hour

References:

Phipps, Lloyd J. & Carl L. Reynolds, *Mechanics in Agriculture*, Interstate Publishers, Inc. Danville, IL. 1992.

Cooper, Elmer L. & William Hamilton, Agricultural Mechanics Fundamentals & Applications, 3E, Delmar Publishers, Albany, NY. 1997

Cooper, Elmer L. & William Hamilton, Lab Manual to accompany Agricultural Mechanics Fundamentals & Applications, 3rd Edition, Delmar Publishers, Albany, NY. 1997

Materials and Equipment:

Textbook

Lab Manual

Computer

Chalkboard

Teaching Procedure

Introduction and Mental Set

Agriculture related employment accounts for 20% of the Georgia work force. Students not introduced to agriculture related employment opportunities will be missing a fifth of the possible job opportunities. Students must also realize that the majority of jobs within agriculture are related to agriculture but are not necessarily farming and that ***Mechanical Applications*** are found throughout agriculture. Students must understand how agriculture touches every aspect of their lives, including job employment.

To emphasize the importance and scope of the agriculture industry, bring in a guest speaker from a respected company in your community.

**Discussion**

1. Career opportunities in agriculture. Power point link:

 <http://aged.calpoly.edu/aged/aged410/presentations/agcareers.ppt>

1. What are the career opportunities in Agriculture Machinery Industry?

A. Machinery set-up person

B. Field delivery person

C. Mechanics helper

D. Machinery mechanic

E. Tractor mechanic

F. Equipment salesperson

G. Service manager

H. Parts person

I. Parts manager

1. Equipment dealer
2. Agricultural engineer
3. Farm equipment operator
4. Service representative
5. Shop foreman
6. Safety specialist
7. What benefits does a worker gain from a career in the Agriculture Machinery

 Industry?

A. Working conditions with equipment dealers and manufacturers are generally good.

B. Frequent contact with farmers and ranchers as customers is common.

1. What are characteristics of working conditions and skills involved in agriculture mechanics careers?

 A. Salesperson, service manager, and parts person devote most of their time to dealing with customers.

B. Parts person- spends most of the time working with the numbers of parts, reading manuals, ordering parts, unpacking orders, and shelving new shipments.

C. Parts manager- handles the inventory of parts, orders parts for restocking, and makes special orders. Also, store promotions, advertising displays, and decisions on items to stock.

D. Machinery set-up person, field delivery person, and the mechanics helper (In the service and repair department)- involved mainly with using hand tools to assemble and disassemble equipment. The field delivery person must especially have the ability to make the final calibrations and adjustments on the machinery and equipment delivered.

E. Service manager- The service manager has a unique set of tasks such as answering telephone calls, ordering parts, and scheduling the work in the shop area. The service manager has much contact with customers, shop equipment salespersons, and service representatives of the manufacturing company.

F. Tractor and machinery mechanics- highly specialized persons. Their work involves all aspects of tractor and machinery repair, ranging from simple repairs to highly technical activities involving electronics and hydraulics. Some contact with customers. Most work is done inside a shop.

G. Equipment dealer- The person responsible for all aspects of the business. Much of the work is done inside a comfortable office. Decisions the dealer makes involves large sums of money. High risk is involved, since the company’s profits or losses determine the income of the dealer. The ability to relate well with all people is important.

* Various educational backgrounds and skills are needed for each career. Some require only a high school diploma, while others require technical school or college degrees. In some instances a company will train a person according to company standards.
* Average starting wages for beginning workers:

- Machinery set-up person: 1 to 2 times minimum wage rate

- Field delivery person: 1.5 to 2 times minimum wage rate

- Mechanics helper: 1 to 1.5 times minimum wage rate

- Machinery mechanic: 2 times minimum wage rate

- Tractor mechanic: 2 times minimum wage rate

- Equipment salesperson: 14,000 to 24,000 per year

- Service manager: 25,000 to 35,000 plus per year

- Parts person: minimum wage rate

- Parts manager: 20,000 to 30,000 plus per year

* Equipment dealer: typically 30,000 to 40,000 plus per year. Fluctuation of jobs and wages are directly related to the success of agriculture production yield profits.

 **ACTIVITIES**

1. Have studentsCheck the *Dictionary of Occupational Titles* for agricultural

 mechanics jobs that interest them the most.

1. Have students consult the yellow pages of you local phone book. Record the names, addresses, and phone numbers of all agencies who hire people in the job that interests them.
2. Have each student conduct an interview with a person that is involved in a job position that interests the student most.
3. Have students consult the classified ads of local and regional newspapers to find jobs related to their chosen field.
4. Conduct a field trip to local businesses that that employ people in the agricultural mechanics field.
5. Have each student conduct an interview with a person that is involved in a job position that interests the student most.
6. Consult computer web-sites that give information on careers and employment in the agricultural machinery industry.

Related links: <http://www.bls.gov/oco/ocoiab.htm>

 <http://www.bls.gov/oco/ocos190.htm>

 <http://www.bls.gov/oco/ocos115.htm>

 <http://www.bls.gov/oco/ocos182.htm>

 <http://www.bls.gov/oco/ocos196.htm>

 <http://www.edunetconnect.com/cat/careers/agrict.html>

 <http://www.ag.ksu.edu/careers/ag_tech.htm>

 <http://www.ffa.org/careers/index.html>

 <http://www.fb.com/today/class/opportun.htm>

1. Using the above resources, have the students prepare and present to the class

 a summary of their chosen agricultural mechanics career. Include the

 following parts in the report: a) job title, b) outlook for the future, c)working

 conditions, d) personal and educational requirements for success, e) special

 advantages of the job, e) special advantages of the job, and f) hazards and

 other disadvantages.

Summary

Agriculture is Americas number one employer. Many high school students show their interests in this area simply by choosing to take agricultural-related courses. These students need an awareness of career opportunities in American agriculture. They can begin some direction in their career choices based on this study of the amount of education and special training required, salary income, opportunities for advancement, fringe benefits, physical requirements, etc. Furthermore, students can begin to decide on a career that really interests them.

**Evaluation**

Written test

Written reports

Oral presentations