

Advanced Crop Science

Curriculum Guide: *Advanced Crop Science*

Unit: VII. Soybean Production

Unit Objective:

Students will demonstrate an understanding of basic principles of soybean production by comparing and contrasting the management decisions applied by regional soybean producers and presenting their findings in an oral report.

Show-Me Standards: 2.1, CA6

References:

Advanced Crop Science. University of Missouri-Columbia, Instructional Materials Laboratory, 2000.

Missouri Soybean Association. Accessed October 30, 2003, from <http://www.mosoy.org/MSA/msa.htm>.

Soybeans. Missouri Farm Facts. Accessed October 30, 2003, from <http://agebb.missouri.edu/mass/farmfact/crops/soybean/index.htm>.

Soybeans. MU Extension. University of Missouri-Columbia. Accessed October 30, 2003, from <http://muextension.missouri.edu/explore/agguides/crops/#Soybeans>.

United Soybean Board. Accessed November 11, 2003, from <http://www.unitedsoybean.org/>.

Instructional Strategies/Activities:

- Students will engage in study questions in lessons 1 through 8.
- Students will complete AS 2.1, Selecting a Seed Variety; AS 2.2, Identify Soybean Diseases; AS 3.1, Determining Planting Rates; AS 4.1, Matching Herbicides to Specific Weeds; AS 5.1, Soybean Replant Worksheet; AS 6.1, Measuring Harvest Loss; AS 7.1, Figuring Soybean Returns; and AS 8.1, Determining Soybean Costs.
- Additional activities that relate to the unit objective can be found under the heading "Other Activities" in the following locations: p. VII-27, p. VII-37, p. VII-59, and p. VII-71.

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Performance-Based Assessment:

Students will work in groups to compare and contrast the management decisions applied by soybean producers in their area. Each group will interview a different soybean producer to learn about the operation and management techniques the producer prefers and why. Following the interviews, groups will be paired to compare and contrast their findings. The groups will present their findings to the class in an oral report.

Assessment will be based on the overall content and presentation of the report.

**Unit VII—Soybean Production
Instructor Guide**

The instructor should assign the performance-based assessment activity at the beginning of the unit. Students will work toward completing the activity as they progress through the unit lessons. The assessment activity will be due at the completion of the unit.

1. Prior to assigning the performance-based assessment activity, contact soybean producers in the area and develop a list of producers willing to be interviewed by students. NOTE: It is preferable to have more producers, rather than fewer, if possible, because this will provide more opportunity for varied management styles and will help ensure a sufficient number of producers in case any must later cancel the interview. If possible, contact producers whose operations reflect the diversified uses of soybeans.
2. Divide the class into an even number of groups and assign each group one of the soybean producers to interview. If preferred, arrange for telephone interviews with the producers or have them attend class for a panel discussion.
3. Lead students in a discussion to establish key topics and develop a uniform interview questionnaire. A uniform questionnaire is important because students will be comparing and contrasting information they collect. Sample questions might include the following:
 - How did you get started working with soybeans?
 - What planting method do you use and why do you prefer this method?
 - What weeds represent the biggest threat to your crop and how do you control them?
 - What crops do you rotate with your soybeans?
 - What is the biggest challenge you face in your operation?
 - What do you foresee for the future of your operation?
 - What advice would you give to someone who is considering a career in soybean production?
4. Have the students interview their assigned producer about his or her soybean operation and management techniques.
5. Following the interviews, pair up groups to discuss how the two operations are similar and different. Each group will present its findings to the class in an oral report.

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- a. Explain that the pairs of groups should discuss their presentations so that their reports work together to provide a clear and thorough picture of the two operations rather than presenting the same information.
 - b. Students should be prepared to answer questions about their reports.
6. The final assessment score will be based on the overall content and presentation of the report.
7. **ADDITIONAL ACTIVITIES:**
- a. Lead a discussion about non-traditional uses for products and by-products of soybean production. Have students provide examples and write the examples on a poster. Each day challenge the students to think of additional products and applications to add to the poster.
 - b. Have students identify a non-traditional use for a product or by-product of soybean production and briefly explain it to the class. Students could work independently or in small groups.

**Unit VII—Soybean Production
Student Handout**

1. The instructor will divide the class into groups and provide each group with the name of a soybean producer.
2. Your group will interview the producer about his or her soybean operation and management techniques.
3. Following the interviews, your group will meet with another group to discuss how the two operations are similar and different.
4. Present your findings to the class in an oral report. Remember that your group's report should work with the other group's report to provide a clear and thorough picture of the two operations rather than present the same information.
5. Be prepared to answer questions from your instructor and classmates regarding your report.
6. Your final assessment score will be based on the content and presentation of your report.

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Unit VII—Soybean Production Scoring Guide

Name _____

Assessment Area	Criteria	0 Points	1 Point	2 Points	3 Points	4 Points	Weight	Total
Information and Content of Report	<ul style="list-style-type: none"> <input type="checkbox"/> Addresses all key topics and questionnaire questions <input type="checkbox"/> Information is complete <input type="checkbox"/> Facts are accurate <input type="checkbox"/> Report works well with other group's report and does not present the same information 	0 criteria met	1 criterion met	2 criteria met	3 criteria met	All 4 criteria met	X 20	
Presentation of Report	<ul style="list-style-type: none"> <input type="checkbox"/> Well organized <input type="checkbox"/> Engages listeners <input type="checkbox"/> Speaks clearly and uses correct grammar <input type="checkbox"/> Maintains good posture and eye contact 	0 criteria met	1 criterion met	2 criteria met	3 criteria met	All 4 criteria met	X 5	
TOTAL								

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Final Assessment Total _____/100 pts.

Comments:

