

# Sustainability in the Southern High Plains

## Identification

**Unit Topic:** Sustainable Agriculture in the Southern High Plains

**Lesson Title:** Defining and Understanding Farming Systems

## Objectives (The student will be able to...)

- Given a case study of a farming system, list six components of a farming system.
- List one reason why each component of the farming system is important, given a list of components derived from class discussion.
- Given a case study of a developing country farming system, list two components of the farming system that were overlooked.
- Given the farming system components identified by the developing country case study, formulate ideas to improve the farming system by using technological advances.

## Teaching Materials and Resources (What do you need to bring?)

- One case study of a farming system (in student workbook)
- One case study of a developing country farming system (in student workbook)

## Teaching Procedures– Preparation, Presentation, Application, Evaluation

### Preparation (Interest Approach/Motivator)

Key Points	Methods
<p>– Have selected students each assume roles as if they were in a developing country. Follow protocol in teacher’s manual.</p> <p>– The teacher will go around to each student and change parts of the farming system, asking students how they will be affected.</p> <p>– As the teacher changes parts of the farming system, emphasize the importance of each unique component of the farming system.</p>	<p>– Pass out roles found in teacher workbook and give each to selected students.</p> <p>– The teacher assumes the role outlined in the teacher workbook.</p> <p>– Teacher-led activity with student participation.</p>

<ul style="list-style-type: none"> <li>– After role play is complete have the students sit down and ask them if they thought each student acting out the role play had a significant component of the farming system. Ask why each of the students' roles was important in the farming system.</li> <li>– Today we will identify some of the major components of a farming system.</li> <li>– Describe the importance of each of the farming system's components.</li> <li>– List reasons why components of farming systems cannot be overlooked.</li> <li>– Rank farming system components in order of importance.</li> </ul>	<ul style="list-style-type: none"> <li>– Teacher led questioning about role play.</li> <li>– Review objectives.</li> </ul>
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**Presentation (The Content)**

<p><b>Key Points</b></p> <ul style="list-style-type: none"> <li>– Give the definitions of farming systems that are in the student workbook.</li> <li>– Go through the sorghum millet case study in the student workbook, asking students to write down components of the farming system that they see present in the case study.</li> <li>– Ask for the constraints that the farming system faces that were mentioned in the case study.</li> <li>– Have students list other components derived from class discussion in their student workbooks.</li> <li>– Have students refer back to the role play and ask which components of the farming system were overlooked.</li> <li>– Have students identify which parts of the farming system they would eliminate to improve the farming system. Also, ask students how they would go about eliminating constraints of the farming system.</li> </ul>	<p><b>Methods</b></p> <ul style="list-style-type: none"> <li>– Give definitions and discuss.</li> <li>– Teacher-led. Have students write farming system components in student workbook.</li> <li>– Write responses in student workbook.</li> <li>– Write components on board as students write in their notes.</li> <li>– Write overlooked components on the board.</li> <li>– Write responses in student workbook.</li> </ul>
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**Application (What will they do with what you taught?)**

<p>Key Points</p> <ul style="list-style-type: none"><li>– Ask students to think back to the role play situation at the beginning of class and have them list what they would introduce to the farming system that would increase the quality of life for the farmers of Tanzania. Ask the students who volunteered for the role play how their situations would change if a new idea or way of farming was introduced to Tanzania.</li></ul>	<p>Methods</p> <ul style="list-style-type: none"><li>– Have students write on the chalkboard changes that they would make.</li><li>– After listing changes as a class, discuss the changes that students suggested.</li></ul>
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**Evaluation (How do you know they learned it?)**

<p>Key Points</p> <ul style="list-style-type: none"><li>– What are the components of a farming system?</li><li>– Why is each component important?</li><li>– Do all components of the farming system tie in together?</li><li>– Why can't you overlook any of the components?</li><li>– Even though you can rank farming system components, are all components still just as important as others?</li> <li>– Lead into tomorrow by explaining that farming systems are present in the Southern High Plains, but farming systems in the Southern High Plains are unique in their own ways.</li> <li>– Tomorrow Southern High Plains farming systems will be defined.</li></ul>	<p>Methods</p> <ul style="list-style-type: none"><li>– Oral Questioning.</li> <li>– Summary lead-in for tomorrow.</li></ul>
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