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**AGSC 140**  
**Computer Applications in Precision Farming II**  
**Spring 2002**

First Examination Study Guide

**Prepared By**

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- Define precision farming
- What is meant by site specific crop management?
- What are the main objectives of precision farming?
- Ways precision farming can be useful to farmers
- What does precision farming involve?
- What are the needed components of a precision farming system?
- What are examples of crop production inputs that can be varied?
- Define yield monitoring and how it is measured.
- Know the three approaches to measuring yield.
- What kind of sensors are needed in yield monitoring?
- How is yield mapping related to yield monitoring and data collection?
- Why is soil sampling and testing needed?
- What are the soil sampling-related factors that influence yield?
- Why is soil fertility important and why should be monitored?
- Why would need to monitor soil pH?
- What are some of the other factors that influence crop yield (aside from nutrients, fertility, and pH)?
- What are the three soil sampling methods that are usually followed in precision agriculture?
- What are some of the factors that one should consider in a soil sampling program?
- Define variable rate application.
- Why use variable rate application and when should it become an integral part of a precision farming system?
- What are the two methods for implementing variable rate application?
- What are the benefits and drawbacks of map-based variable rate application systems?
- What are the primary components of map-based variable rate application systems?
- What are variable rate controllers and actuators used for?
- What are some of the issues that one should consider in variable rate application systems?