

## H344 Organic Greenhouse Production

### Catalog Statement:

Fundamentals of greenhouse production using organic production methods.

This is a 1-credit course offered Spring Semester combining lecture and lab experience. (Scheduling may be dependent upon other 344 module schedules) There will be a required overnight field trip to visit two organic greenhouse operations in western Colorado.

### Learning Objectives:

To understand the fundamental requirements for the successful operation of an organic greenhouse, and approaches to addressing probable challenges specifically under organic production requirements.

### Course Specifics:

A combination of lectures, hands-on greenhouse experience and field trips will provide students with a comprehensive understanding of the requirements for successful organic greenhouse production, with a primary focus on food crops. Discussion of marketing opportunities and enterprise analysis will provide students with tools to determine the feasibility of an organic greenhouse project.

Visits to organic greenhouse operations will provide students with case studies to elaborate many of the topics covered during lectures and lab sessions.

Lead Instructors: Frank Stonaker, Horticulture  
Office: 113 University Greenhouses on Lake St.  
Phone: 491-7068  
Email: [Frank.Stonaker@Colostate.edu](mailto:Frank.Stonaker@Colostate.edu)

Steve Newman, Horticulture  
Office: 105 Shepardson  
Phone: 491-7118  
Email: [Steven.Newman@Colostate.edu](mailto:Steven.Newman@Colostate.edu)

### Texts

Readings will be assigned from:

Nelson, Paul V. 1991. Greenhouse Operation and Management. Prentice Hall.  
Coleman, Eliot. 1992. Four Season Harvest. Chelsea Green Publishing.  
Bartok, John W., Jr. 2002. Energy Conservation for Commercial Greenhouses. NRAES.

### Prerequisites

H310 or instructor permission

### Evaluation:

Students will write a 4-page report on the two organic greenhouse operations visited, describing the operation's two greatest challenges, and possible solutions. Weekly quizzes will review previous class and lab material. The Final Exam will be comprehensive.

Report	= 100
Quizzes	= 100
Final Exam	= <u>100</u>
Total	<u>300</u>

### Schedule:

Week 1	Organic greenhouse opportunities and marketing
Week 2	The greenhouse environment; climate control (heating, cooling, humidity management)
Week 3	Organic growing media
Week 4	Organic fertilization and water quality
Week 5	Primary pests, and management options
Week 6	Primary diseases and management options Field trip - during the weekend
Week 7	Enterprise feasibility
Week 8	<b>Final Exam</b>