HORT 1004 HORTICULTURAL PRODUCTION SYSTEMS

Credit Points 10

Legacy Code 301096

Coordinator Michelle Mak (https://directory.westernsydney.edu.au/search/name/Michelle Mak/)

Description Food represents the single largest part of your environmental footprint. This means our modern, urban-oriented society must begin to reconnect with the sources of our food to create more sustainable future. This unit explores the scientific basis of sustainable crop production by examining fruit, vegetable and grain enterprises. Management of produce from harvest to consumption will also be explored to examine factors that impact upon food quality and safety. Students will compare and contrast growing conditions of the highly variable Australian environment to consider the global context for horticultural industry development. By delving into the world of crop management, students will identify the impacts (opportunities and constraints) of plant physiology on the sustainability of food. Students will also consider how novel food products can prompt consumers to appreciate the environmental, economic and social benefits that can arise from sustainable horticultural production.

School Science

Discipline Horticulture

Student Contribution Band HECS Band 1 10cp

Check your HECS Band contribution amount via the Fees (https://www.westernsydney.edu.au/currentstudents/current_students/fees/) page.

Level Undergraduate Level 1 subject

Equivalent Subjects HORT 1003 - Horticultural Production 2 LGYA 5944 - Fruit Production HORT 1002 - Crop Production HORT 1001 - Crop Production

Assumed Knowledge

Basic knowledge of plants.

Learning Outcomes

On successful completion of this subject, students should be able to:

1. Explain the science and practices in crop production and the cause and effect behind these practices
2. Analyse the benefits and limiting factors of a range of basic techniques used in crop production
3. Explain the basic principles of production management of selected crops
4. Describe the harvesting, processing, quality control and packaging of foods derived from crop production
5. Explain the cost of production for the selected crops grown and justify this against potential market gains
6. Predict the effects of environmental modification on crop yield, quality and market potential
7. Appropriately determine plant biomass and calculate fertiliser and chemical application rates

Subject Content

1. Sustainable crop production practices to food processing and analysis
2. Growing environment, soil media, and nursery practices
3. Seed (collection, viability, storage, germination) production
4. Fruit production (temperate and subtropical), tropical fruits in Australia
5. Plant propagation and micro propagation
6. Comparative analysis of current and innovative extensive and intensive production systems
7. Broad-acre field & agricultural crop production
8. Environmental and physiological factors affecting agricultural crops in Australian and international climates
9. Fresh produce?harvest, quality & processing
10. Grafting, budding & planting crops in field
11. Field crop management from seeding to harvest and post-harvest
12. Fruits / Orchard pruning & management for fruiting plants
13. Apiculture (production & management)
14. Real world experience through field trips to orchards, mushroom industry and broad-acre crops and project based assessment

Assessment

The following table summarises the standard assessment tasks for this subject. Please note this is a guide only. Assessment tasks are regularly updated, where there is a difference your Learning Guide takes precedence.

Item	Length	Percent	Threshold	Individual/ Group Task
Proposal	1000 words	15	N	Individual
Marketing pitch	1000 words	20	N	Individual
Reflection	4 pages	15	N	Individual
Final Exam	2 hours	50	N	Individual

Teaching Periods