UNIVERSITI TEKNOLOGI MARA

AGR612: MANAGEMENT OF PLANTATION CROPS II

Course Name (English)	MANAGEMENT OF PLANTATION CROPS II APPROVED
Course Code	AGR612
MQF Credit	3
Course Description	no description provided
Transferable Skills	KNOWLEDGE, COMMUNICATION, LEADERSHIP AND TEAMWORK
CLO	CLO1 Explain the economic importance of paddy, cocoa, pineapple and pepper as secondary plantation crops CLO2 Discuss the agronomic requirement and practices for sustainable secondary crop production CLO3 Identify and communicate the ideas on current situation of secondary plantation crops in Malaysia through presentation and report of assignment
Pre-Requisite Courses	No course recommendations

Topics
1. 1.0 PADDY 1.1) 1.1 Introduction 1.2) 1.1.1 Wet paddy 1.3) 1.1.2 Upland paddy 1.4) 1.1.3 Aerobic paddy 1.5) 1.1.4 Varieties/clones cultivated in Malaysia 1.6) 1.2 Propagation 1.7) 1.2.1 Types of planting material 1.8) 1.2.2 Methods of propagation 1.9) 1.2.3 Advantages and disadvantages of each propagation methods 1.10) 1.2.4 Wet nursery and box nursery 1.11) 1.3 Field Planting 1.12) 1.3.1 Land preparation – Materials and methods used 1.13) 1.3.2 Planting and transplanting techniques 1.14) 1.3.3 Planting distance and planting density 1.15) 1.4. Agronomic Practices 1.16) 1.4.1. Fertilizer requirement and programmes 1.17) 1.4.2. Identification of common pests (insect, diseases and weeds) and control strategies 1.18) 1.4.3. Pruning methods and techniques 1.19) 1.4.4. Water requirement: Problem area/soil, silt pit, foothill drains 1.20) 1.4.5. General repairs 1.21) 1.5 Harvesting 1.22) 1.5.1 Harvesting criteria 1.23) 1.5.2 Harvesting methods: Manual / Mechanical 1.24) 1.5.3 Technology used 1.25) 1.5.4 Problems involved in harvesting 1.26) 1.6 Processing 1.27) 1.6.1 Preparation methods before milling 1.28) 1.6.2 Flow of processing
2. 2.0 COCOA 2.1) 2.1 Morphology of cocoa plant 2.2) 2.2 Soil and climatic requirements 2.3) 2.3 Clones 2.4) 2.3.1 Original and principal clones cultivated in Malaysia 2.5) 2.3.2 Characteristics and yield potential of commercial clone 2.6) 2.4 Propagation 2.7) 2.4.1 Types of planting materials 2.8) 2.4.2 Methods of propagation and shortcoming of various propagation

2.9) methods
2.10) 2.5 Field Planting
2.11) 2.5.1 Techniques of transplanting and field planting
2.12) 2.5.2 Planting distance and planting density
2.13) 2.5.3 Shading and intercropping
2.14) 2.6 Agronomic practices
2.15) 2.6.1 Fertilizer requirement and programmes
2.16) 2.6.2 Identification of common pests (insect, diseases and weeds) and control strategies
2.17) 2.6.3 Pruning methods and techniques
2.18) 2.7 Harvesting
2.19) 2.7.1 Harvesting criteria
2.20) 2.7.2 Methods of harvesting
2.21) 2.7.3 Technology used
2.22) 2.8 Processing
2.23) 2.8.1 Fermentation and drying methods
2.24) 2.8.2 Grading
2.25) 2.8.3 Product

3. 3.0 PINEAPPLE
3.1) 3.1 Morphology of pineapple plant
3.2) 3.2 Soil and climatic requirements
3.3) 3.3 New varieties in Malaysia
3.4) 3.3.1 Original and principal varieties cultivated in Malaysia
3.5) 3.4.2 Characteristics and yield potential for commercial production
3.6) 3.4 Propagation
3.7) 3.4.2 Types of planting materials
3.8) 3.4.2 Nursery preparation and methods of propagation
3.9) 3.5 Field Planting
3.10) 3.5.1 Techniques of field planting
3.11) 3.5.2 Planting distance and planting density
3.12) 3.6 Agronomical practices
3.13) 3.6.1 Fertilizer requirement and programmes
3.14) 3.6.2 Identification of common pests (insect, diseases and weeds) and control strategies
3.15) 3.6.3 Flower induction and hormone for fruits development
3.16) 3.7 Harvesting
3.17) 3.7.1 Harvesting criteria
3.18) 3.7.2 Methods of harvesting
3.19) 3.7.3 Technology used

4. 4.0 PEPPER
4.1) 4.1 Morphology of pepper plants
4.2) 4.2 Soil and climatic requirements
4.3) 4.3 New varieties in Malaysia
4.4) 4.3.1 Original and principal varieties cultivated in Malaysia
4.5) 4.3.2 Characteristics and yield potential for commercial production
4.6) 4.4 Propagation
4.7) 4.4.1 Types of planting materials
4.8) 4.4.2 Nursery preparation and methods of propagation
4.9) 4.5 Field Planting
4.10) 4.5.1 Techniques of field planting
4.11) 4.5.2 Planting distance and planting density
4.12) 4.5.5 Support systems
4.13) 4.6 Agronomical practices
4.14) 4.6.1 Fertilizer requirement and programmes
4.15) 4.6.2 Identification of common pests (insect, diseases and weeds) and control strategies
4.16) 4.6.3 Pruning methods and techniques
4.17) 4.7 Harvesting
4.18) 4.7.1 Harvesting criteria
4.19) 4.7.2 Methods of harvesting
4.20) 4.7.3 Technology used
4.21) 4.8 Processing
4.22) 4.8.1 Black pepper processing
4.23) 4.8.2 White pepper processing

Assessment Breakdown	%
Continuous Assessment	60.00%
Final Assessment	40.00%

Details of Continuous Assessment

Assessment Type	Assessment Description	% of Total Mark	CLO
Assignment	INDIVIDUAL ASSIGNMENT	10%	CLO2
Assignment	Case Study	20%	CLO3
Test	TEST	30%	CLO1

Reading List

Recommended Text

- **Hebbar, P., Bittenbender, H.C, and O'Deherty, D. 2011, *Farm and Forestry and Marketing Profile for Cocoa (Theobrama cocoa). Permanent Agriculture Resources.***
- **Scot, C.N and Cannon-Eger, K.T. 2011, *Farm and Forestry and Marketing Profile for Black Pepper (Piper nigrum). Permanent Agriculture Resources.***
- **Sharma, S.D. 2010, *Rice: Origin, antiquity and history. CRC Press.***
- **Clay, J.W. 2004, *World Agriculture and Environment: A commodity by Commodity Guide to Impacts and Practices. Island Press.***
- **Elzebroek A.T.G. and Wind K. 2008, *Guide to Cultivated Plants. CABI Publishing.***
- **Wan Hanisah, W.I, Ahmed Azhar,J and Neni Katini C.R. 2003, *Production of Secondary Crops. UPENA, UiTM, Pahang.***
- **Wayne Smith, C and Dilday, R.H. 2003, *Rice: Origin, history, technology and production. John Wiley & Son.***

Article/Paper List: This Course does not have any article/paper resources

Other References: This Course does not have any other resources