



UNIVERSITI TEKNOLOGI MARA

AGR462: MANAGEMENT OF PLANTATION CROPS I

<b>Course Name (English)</b>	MANAGEMENT OF PLANTATION CROPS I <b>APPROVED</b>
<b>Course Code</b>	AGR462
<b>MQF Credit</b>	3
<b>Course Description</b>	no description provided
<b>Transferable Skills</b>	Communication and Leadership and Teamwork
<b>CLO</b>	CLO1 Explain the economic importance, classification and techniques of growing oil palm, rubber and paddy.. CLO2 Evaluate the good agricultural practices in both oil palm and rubber plantation for sustainable production and employ new technology for harvesting and processing. CLO3 Communicate to peers and team members, in the classroom verbally and to the facilitator in writing on the best and sustainable practices of growing and maintaining of oil palm and rubber.
<b>Pre-Requisite Courses</b>	No course recommendations
<b>Topics</b>	
<b>1. 1.0 OIL PALM</b> 1.1) 1.1. Introduction 1.2) Overview of the oil palm plantation in Malaysia; acreage, distribution, production and economic important 1.3) 1.2. Climatic and soil requirement 1.4) 1.3. Land Preparation 1.5) 1.3.1. Tillage operation; lining, holing, terracing, drainage and irrigation 1.6) 1.4. Planting materials 1.7) 1.4.1. Methods of propagation and types of planting materials, 1.8) 1.4.2. Seedlings preparation 1.9) 1.4.3. Nursery preparation and maintenance 1.10) 1.4.4. Tissue culture 1.11) 1.5. Field Operations(Agronomic Practices) 1.12) 1.5.1. Planting and Transplanting procedures; seedling selection, transplanting technique, planting density and planting design. 1.13) 1.5.2. Fertilizer management; fertilizer selection, application technique, fertilizing programmes 1.14) 1.5.3. Pest and disease management; pest and disease evaluation, control strategies 1.15) 1.5.4. Weed management; weed identification, assessment and control strategies, control programme 1.16) 1.5.5. Canopy management; frond pruning 1.17) 1.5.6. Water management; irrigation and drainage 1.18) 1.5.7. Sanitation 1.19) 1.6. Harvesting and Processing, 1.20) 1.6.1. Harvesting standard 1.21) 1.6.2. Harvesting methods, bunch grading, transportation 1.22) 1.6.3. Loose fruits handling 1.23) 1.6.4. Milling process	
<b>2. 2.0 RUBBER</b> 2.1) 2.1 Introduction 2.2) 2.1.1. Rubber Plantation Industry in Malaysia: A profile 2.3) 2.1.2. Technological changes in natural rubber industry 2.4) 2.2 Climatic requirements & soil requirement 2.5) 2.3 Propagation 2.6) 2.3.1 Seedlings: seeds selection, seed germination 2.7) 2.3.2 Grafting : grafting methods 2.8) 2.3.3 Stumps 2.9) 2.3.4 Tissue culture.	

- 2.10) 2.4 Planting Materials
- 2.11) 2.4.1 Varietal/ clones selection
- 2.12) 2.4.2 Seedling preparation for soot stock
- 2.13) 2.4.3 Bud woods preparation for grafting: bud woods selection green/brown
- 2.14) 2.4.4 Stumps planting
- 2.15) 2.5 Nurseries preparation and maintenance
- 2.16) 2.5.1 Site selection
- 2.17) 2.5.2 Soil/bed preparation
- 2.18) 2.5.3 Irrigation and nutrients
- 2.19) 2.6 Field Operation
- 2.20) 2.6.1 Planting and Transplanting procedures; seedling selection, transplanting technique, planting density and planting design.
- 2.21) 2.6.2 Fertilizer management; fertilizer selection, application technique, fertilizing programmes
- 2.22) 2.6.3 Pest and disease management; pest and disease evaluation, control strategies
- 2.23) 2.6.4 Weed management; weed identification, assessment and control strategies
- 2.24) 2.6.5 Branch pruning for tapping height control
- 2.25) 2.6.6 Water management; irrigation and drainage
- 2.26) 2.6.7 Sanitation and waste management
- 2.27) 2.7 Tapping
- 2.28) 2.7.1 Tapping panel initiation/opening
- 2.29) 2.7.2 Tapping systems and techniques: normal tapping, controlled and upward tapping
- 2.30) 2.7.3 Tapping schedule
- 2.31) 2.7.4 Latex yield stimulation: Ethephon, Gaseous (RRIMFLOW & REACTORRIM)
- 2.32) 2.7.5 Latex collection: cuplump, polybag
- 2.33) 2.7.6 Current development in tapping technique
- 2.34) 2.8 Rubber processing
- 2.35) 2.8.1 Latex
- 2.36) 2.8.2 Dry rubber
- 2.37) 2.9 Production cost analysis

Assessment Breakdown	%
Continuous Assessment	60.00%
Final Assessment	40.00%

Details of Continuous Assessment	Assessment Type	Assessment Description	% of Total Mark	CLO
	Assignment	Detail report on the process of planting oil palm and rubber.	20%	CLO2
	Presentation	Video presentation on topics chosen in oil palm	20%	CLO3
	Test	Test on topics regarding oil palm	20%	CLO1

Reading List	Recommended Text
	<ul style="list-style-type: none"> <li>• MARDI 2006, <i>Anggaran Kos Pengeluaran dan Pendapatan bagi Tanaman Industri</i>. Mohamed Nasir, S. (ed.). MARDI</li> <li>• Acquaah, G. 2005, <i>Principles of Crop Production: Theory, Techniques and Technology, 2nd. Edition</i>. Pearson Prentice Hall.</li> <li>• MPOB 2004, <i>Perusahaan Sawit di Malaysia-Satu Panduan, Edisi Milenium</i>. Lembaga Minyak Sawit Malaysia (MPOB).</li> <li>• MRB 2004, <i>Manual Teknologi Penanaman Getah</i>. Lembaga Getah Malaysia (MRB), Kuala Lumpur.</li> <li>• Palm Oil Research Institute of Malaysia. 1994, <i>Selected Readings on Palm Oil and Its Uses</i>. Harian (Zulfadzli) Sdn. Bhd.</li> <li>• Abu Bakar Ahmad 1985, <i>Teknologi Getah Asli</i>. RRIM, K. Lumpur.</li> <li>• MARDI 1985, <i>Panduan amali, keperluan dan syor-syor untuk tanaman padi secara tabur terus dan mengubah</i>. MARDI, K.L.</li> </ul>

<b>Article/Paper List</b>	This Course does not have any article/paper resources
<b>Other References</b>	This Course does not have any other resources