**HRT 3107 SPICES**

Lecturers Dr. Mildred Ochwo-Ssemakula BSc. (MUK); MSc. (MUK); PhD (MUK)

Mr. David Wanyama BSc. (SUA); MSc. (JKUAT)

Course type: CORE (BSc. Horticulture III)

1. COURSE STRUCTURE

Course Credits (CU): 3 CU

Course Duration: 15 weeks (45 contact hours per Semester) i.e. 30 LH, 30 PH and 2 weeks of examination

Course description

Importance of spices; classification of spices; principles and practices in spice crop production; morphology and ecology of important spice crops such as: vanilla, chillies, ginger and cardamom, among others.

1. COURSE OBJECTIVES

General objective / aim: To emphasize the status of spice crops in the world economy and provide students with knowledge on trends in spice crop production and trade

Specific objectives

* + Elucidate the effect of spices on the development of human history and culture
  + Describe the chemical, biological and ecological characteristics of spice crops
  + Study the current uses of spice crops

1. RECOMMENDED REFERENCES FOR READING
   * 1. Purseglove J W, Brown E G, Green C L and Robbins S R J. 1990. Spices Volume 1 and 2. Tropical Agriculture Series, G Wringley (Ed.), AICTA.
     2. De Guzman C C and Siemonsma J S. (Eds.). 1999. Plant Resources of South-East Asia No. 13. Spices. Backhuys Publishers, Leiden, the Netherlands.
     3. Weiss E A. 2002. Spice Crops. Oxford University Press. ISBN-13: 9780851996059, ISBN: 0851996051
2. COURSE CONTENT, METHODS OF INSTRUCTION, TOOLS AND EQUIPMENT REQUIRED

|  |  |  |  |
| --- | --- | --- | --- |
| TOPIC | CONTENT | METHOD OF INSTRUCTION / Time allocated | TOOLS / EQUIPMENT NEEDED |
| 1. Introduction to spices | * Definitions * Origin, distribution and classification * Practical: Presentation using visual aids to facilitate lecture delivery | Interactive lecture (2hrs), Practical (1hr) | Computer, LCD Projector and  Screen, BB, chalk |
| 2. Introduction to spices | * Importance * General botany, properties and agronomy * Ecological factors influencing growth and development * Practical: Presentation using visual aids | Interactive lecture (2hrs), Practical (1hr) | Computer, LCD Projector and  Screen, BB, chalk |
| 3. The Piperaceae family | * Major species and their uses * Properties and botanical description * Practical: Visual aids to facilitate spice identification | Interactive lecture (2hrs), Practical (1hr) | Computer, LCD Projector and  Screen, BB, chalk |
| 4. The Piperaceae family | * Growth and development * Ecological preferences * Agronomic factors in production * Practical: Field trip to a farmer’s field, where pepper is grown | Interactive lecture (2hrs), Practical (6hrs) | BB, chalk  Transport to the farm (30-seater) |
| * Continuous assessment I | 0.5hr |
| 5. The Solanaceae family | * Family description and species composition * Uses and properties * Botanical description and distinction between species * Ecology * Practical: Visual aids to facilitate spice identification & distinction | Interactive lecture (2hrs), Practical (1hr) | Computer, LCD Projector and  Screen, BB, chalk |
| 6. The Solanaceae family | * Agronomic practices * Description of quality attributes of major products * Production statistics * Practical: Presentation using visual aids to facilitate lecture delivery | Interactive lecture (2hrs), Practical (1hr) | Computer, LCD Projector and  Screen, BB, chalk |
| * Continuous assessment II | 0.5hr |
| 7. The Orchidaceae family | * Family description, major species and their history * Uses and properties * Botanical description and ecology * Agronomy, production and trade * Practical: Visual aids to facilitate spice identification and lecture delivery | Interactive lecture (2hrs), Practical (1hr) | Computer, LCD Projector and  Screen, BB, chalk |
| 8. The Zingiberaceae family | * Family description and species composition * Classification of major genera * Description, history and uses of spices * Practical: Presentation using visual aids | Interactive lecture (2hrs), Practical (1hr) | Computer, LCD Projector and  Screen, BB, chalk |
| 9. The Zingiberaceae family | * Botanical description * Properties of species in genera * Production and trade * Practical: Field trip to a firm that processes and exports spice | Interactive lecture (2hrs), Practical (6hrs) | BB, chalk  Transport to the firm (30-seater) |
| 10. The Myrtaceae family | * Family description * Classification of subfamilies: Myrtoideae and Leptospermoideae * Botanical description * Practical: Visual aids to facilitate spice identification | Interactive lecture (2hrs), Practical (1hr) | Computer, LCD Projector and  Screen, BB, chalk |
| 11. The Myrtaceae family | * Description of a major species their uses and properties * Ecology and agronomy * Practical: Presentation using visual aids | Interactive lecture (2hrs), Practical (1hr) | Computer, LCD Projector and  Screen, BB, chalk |
| 12. The Umbelliferae family | * Classification and description of major species * Uses and properties * Description, ecology and agronomy * Practical: Presentation using visual aids | Interactive lecture (2hrs), Practical (1hr) | Computer, LCD Projector and  Screen, BB, chalk |
| 13. Cruciferae spices | * Classification * Description of the mustards: Uses, properties, ecology and agronomy * Practical: Presentation using visual aids | Interactive lecture (2hrs), Practical (1hr) | Computer, LCD Projector and  Screen, BB, chalk |
| 14. Minor spice crops (sesame, onion and garlic) | * Classification * General description of species * Production and trade * Practical: Visit to a major market where spices are sold | Interactive lecture (2hrs), Practical (6hrs) | Computer, LCD Projector and  Screen, BB, chalk, Transport to the market (30-seater) |
| * Continuous assessment III | 1hr |

1. SUMMARY OF TIME NEEDED

Interactive lectures covering theory 28 hrs

Continuous assessment (I, II & III) 2 hrs

Lecture room-based practicals 12 hrs

Field-based practical sessions 18 hrs

1. OVERALL COURSE EVALUATION

Continuous Assessment:

* Tests I, II & III 30%
* Field Practicals 10%

Final examination 60%