

COLLEGE OF AGRICULTURE, SUMERPUR

Lecture programme -2ND Year I Sem (2016-17)

Course: AGRON 4211- Field Crops-I (*Kharif*)

Credits: 3(2+1)

Teacher: Mr. L. K. Jain

Class Time: As per time table

Discipline: Agronomy

| Lecture No. | Topic | Scheduled Date |
|--------------------|---|-----------------------|
| Theory: | | |
| 1. | Rice- importance, origin, distribution, production, soil and climatic requirement. | 20.7.16 |
| 2. | Rice-improved varieties, nursery raising, seed and sowing, intercultural operations/ weed management, fertilizer and water management | 21.7.16 |
| 3. | Rice-plant protection measures, harvesting, processing and yield | 27.7.16 |
| 4. | Maize- importance, origin, distribution, production , soil and climatic requirement, improved varieties, seed and sowing | 28.7.16 |
| 5. | Maize- intercultural operations/weed management, fertilizer and water management, plant protection measures, harvesting and yield | 03.8.16 |
| 6. | Sorghum- importance, origin, distribution, production, soil and climatic requirement and improved varieties for grain and forage | 04.8.16 |
| 7. | Sorghum- seed and sowing, intercultural operations/weed management, fertilizer, and water management for grain and forage | 10.8.16 |
| 8. | Sorghum- plant protection measures, harvesting, yield and cutting management in forage | 11.08.16 |
| 9. | Pearl millet-importance, origin, distribution ,production, soil and climatic requirement (grain & forage). | 17.08.16 |
| 10. | Pearl millet- improved varieties,(grain and forage) seed and sowing, intercultural operation/weed management, mid-season corrections, intercropping and fertilizer management (grain & forage). | 24.08.16 |
| 11. | Pearl millet- water management, plant protection measures, harvesting, yield and cutting management in forage | 31.08.16 |

| | | |
|-----|--|----------|
| 12. | Groundnut – importance of oilseeds and groundnut, origin, distribution, production, soil and climatic requirements | 01.9.16 |
| 13. | Groundnut-growth habits , improved varieties, seed and sowing, pegging | 07.09.16 |
| 14. | Groundnut –intercultural operations/ weed management , fertilizer, and water management, plant protection measures, harvesting shelling and yield | 08.09.16 |
| 15. | Soybean – importance, origin, distribution, production, soil and climatic requirement, improved varieties, seed and sowing | 14.09.16 |
| 16. | Soybean- fertilizer, water and weed management, plant protection measures, harvesting and yield | 15.09.16 |
| 17. | Pigeon pea- importance of pulses and pigeon pea , origin, distribution, soil and climatic requirement, improved varieties | 21.09.16 |
| 18. | Pigeon pea- seed and sowing, intercultural operations/weed management fertilizer and water management, plant protection measures, harvesting and yield | 22.09.16 |
| 19. | Cotton- importance, origin, distribution, production, soil and climatic requirements, types of cotton, improved varieties | 28.09.16 |
| 20. | Cotton- seed and sowing, intercultural operations; weed management, fertilizer, and water management | 29.09.16 |
| 21. | Cotton- plant protection measures, harvesting, quality and yield | 05.10.16 |
| 22. | Clusterbean – package of practices | 06.10.16 |
| 23. | Sesame- package of practices | 13.10.16 |
| 24. | Castor – package of practices | 19.10.16 |
| 25. | Mothbean - package of Practices | 20.10.16 |
| 26. | Mungbean package of practices | 26.10.16 |
| 27. | Urdbean package of practices | 27.10.16 |
| 28. | Cowpea – package of practices | 02.11.16 |
| 29. | Napier - package of practices | 03.11.16 |
| 30. | Minor millets - package of practices | 09.11.16 |
| 31. | Sunhemp – package of practices | 10.11.16 |

| | | |
|------------------|---|----------|
| 32. | Acquaintance about <i>Panicum</i> , <i>Lasiurus</i> and <i>Cenchrus</i> | 16.11.16 |
| Practical | | |
| 1. | Identification of seeds, crops and other inputs | 19.7.16 |
| 2. | Sowing methods of different <i>kharif</i> crops | 26.7.16 |
| 3. | Seed bed preparation of <i>kharif</i> crops | 02.8.16 |
| 4. | Working out seed rate, real value and related numerical | 09.8.16 |
| 5. | Seed treatment and preparation of seed material for sowing | 16.8.16 |
| 6. | Preparation of seed material for planting of grasses | 23.8.16 |
| 7. | Fertilizer application in crops, including top dressing | 30.8.16 |
| 8. | Identification of weeds in pearl millet and other crops | 06.09.16 |
| 9. | Acquaintance with plant protection measures in different crops | 13.09.16 |
| 10. | Irrigation operation in various crops | 20.09.16 |
| 11. | Judging physiological maturity in standing crops | 27.09.16 |
| 12. | Cotton seed treatment | 04.10.16 |
| 13. | Effect of seed size on germination and seedling vigour | 18.10.16 |
| 14. | Yield attributes and calculation on theoretical yield and harvest index | 25.10.16 |
| 15. | Crop harvesting and yield estimation | 08.11.16 |
| 16. | Visit of experiments at farm | 15.11.16 |

COLLEGE OF AGRICULTURE, SUMERPUR
Lecture programme -2ND Year I Sem (2016-17)

Course: AGRON 4212- Weed Management

Credits: 2(1+1)

Teacher: Mr. L. K. Jain

Class Time: As per time table

Discipline: Agronomy

| Lecture No. | Topic | Scheduled Date |
|--------------------|--|-----------------------|
| Theory: | | |
| 1. | Weeds – definition , harmful and beneficial effects and classification | 15.7.16 |
| 2. | Ecology of weeds | 22.7.16 |
| 3. | Weed - reproduction and seed dissemination | 29.7.16 |
| 4. | Crop-weed competition-concept and allelopathy | 05.8.16 |
| 5. | Concepts of weed prevention, eradication and weed control | 12.8.16 |
| 6. | Physical and cultural methods of weed control | 19.8.16 |
| 7. | Chemical and biological methods of weed control | 26.8.16 |
| 8. | Integrated weed management - An introduction | 02.09.16 |
| 9. | Introduction to herbicides, advantages and limitations of herbicides usages | 09.09.16 |
| 10. | Classification of herbicides | 16.09.16 |
| 11. | Introduction of adjuvants-surfactants, stabilizing agents and solvents | 23.09.16 |
| 12. | Adjuvants - stickers, activators and compatibility agents | 30.09.16 |
| 13. | Interaction of herbicides with other agro chemicals | 07.10.16 |
| 14. | Weed management in rice, wheat, barley, maize, sorghum and bajra | 14.10.16 |
| 15. | Weed management in oil seeds & pulses – groundnut , soybean, mustard, gram, lentil, mungbean and urdbean | 02.10.16 |
| 16. | Aquatic weeds and their management | 28.10.16 |
| Practical | | |

| | | |
|-----|---|----------|
| 1. | Identification of common weeds and their characteristics | 18.7.16 |
| 2. | Biology of nut sedge and bermuda grass | 25.7.16 |
| 3. | Biology of <i>Parthenium</i> and <i>Celosia</i> | 01.8.16 |
| 4. | Collection of common <i>kharif</i> weeds and their preservation | 08.8.16 |
| 5. | Collection of common <i>rabi</i> seeds and their preservation | 22.8.16 |
| 6. | Collection of perennial weeds and their preservation | 29.8.16 |
| 7. | To study crop weed competition | 05.9.16 |
| 8. | Identification of common herbicide with their trade name and uses | 19.09.16 |
| 9. | To become familiar with herbicide spray equipments | 26.09.16 |
| 10. | Calibration of herbicide spray equipments | 03.10.16 |
| 11. | Calculation on herbicide requirement for field crops and aquatic situation | 10.10.16 |
| 12. | Application of pre plant , pre-emergence and post emergence herbicides in the field | 17.10.16 |
| 13. | Application of herbicides under aquatic situation | 24.10.16 |
| 14. | Study of phytotoxicity symptoms of herbicides in different crops | 07.11.16 |
| 15. | Economics of weed control practices | 21.11.16 |

Course: MANURES & FERTILIZERS (SCHEM-4221)

Credits: 2(1+1)

Teacher: Dr. H. P. Parewa

Class Time: As per time table

| Lecture No. | Topic | Scheduled Date |
|--------------------|--|-----------------------|
| Theory | | |
| 1. | Soil organic matter, Composition, Decomposability, C: N ratio | 19.07.2016 |
| 2. | Soil biology, Biomass, Soil organisms and their beneficial and harmful roles | 26.07.2016 |
| 3. | Manures – Types, Raw materials, method of preparation, uses and nutrient contents | 02.08.2016 |
| 4. | Mechanical compost plant, Vermicomposting, green manuring their uses and importance | 09.08.2016 |
| 5. | Use of oilcakes, sewage and sludge, bio gas slurry, plant and animal refuges as concentrate organic manure, their importance and nutrient contents | 16.08.2016 |
| 6. | Fertilizers – Their importance and classification | 23.08.2016 |
| 7. | Chemistry of manufacture of ammonium sulphate, Urea, CAN and along with their properties, uses and fate in soil | 30.08.2016 |
| 8. | Chemistry of manufacture of ammonium nitrate and ammonium nitrate sulphate, their importance, properties, uses and fate in soil | 06.09.2016 |
| 9. | Chemistry of manufacture of SSP and enriched super phosphate, their properties, uses and fate in soil | 13.09.2016 |
| 10. | Chemistry of manufacture of DAP and ammonium polyphosphate, their properties, uses and fate in soil | 20.09.2016 |
| 11. | Chemistry of manufacture of MOP and sulphate of potash, their properties, uses and fate in soil | 27.09.2016 |
| 12. | Complex fertilizer – Chemistry of manufacture of nitrophosphate and their properties, uses and fate in soil | 04.10.2016 |
| 13. | Secondary fertilizers and their sources and composition | 18.10.2016 |
| 14. | Amendments, Fertilizer control order and fertilizer storage | 25.10.2016 |
| 15. | Important bio-fertilizer and their advantages | 08.11.2016 |

| | | |
|------------------|--|------------|
| 16. | Micronutrient fertilizers and their sources and composition | 15.11.2016 |
| Practical | | |
| 1. | Identification of glassware's and equipments used in soil science laboratory | 20.07.2016 |
| 2. | Identification of manures and fertilizer and their nutrient content | 27.07.2016 |
| 3. | Determination of organic carbon in manures | 03.08.2016 |
| 4. | Collection of manures and fertilizer sample | 10.08.2016 |
| 5. | Estimation of total N in compost & ammonical nitrogen in a fertilizer sample | 17.08.2016 |
| 6. | Determination of total phosphorus in manures & water soluble phosphorus in fertilizer sample | 24.08.2016 |
| 7. | Estimation of potash content in muriate of potash | 31.08.2016 |
| 8. | Determination of adulteration in fertilizers | 07.09.2016 |
| 9. | Determination of moisture in fertilizers | 14.09.2016 |
| 10. | Methods of inoculation of biofertilizers in seed | 21.09.2016 |
| 11. | Determination of zinc in fertilizer sample | 28.09.2016 |
| 12. | Determination of microbial biomass C in soil | 05.10.2016 |
| 13. | Determination of microbial biomass N in soil | 19.10.2016 |
| 14. | Determination of microbial biomass P in soil | 26.10.2016 |
| 15. | Determination of calcium in fertilizers | 02.11.2016 |
| 16. | Determination of sulphur in fertilizer sample | 09.11.2016 |

Course: AECON- 4211- Production Economics and Farm Management Credits: 2(1+1)

Teacher: Dr. P. C. Meena

Class Time: As per time table

Discipline: Ag. Economics

| Lecture No. | Topic | Scheduled Date |
|--------------------|--|-----------------------|
| Theory | | |
| 1 | Production Economics:-Meaning, Definition, Nature and scope of Agricultural Production Economics. | 18-07-2016 |
| 2 | Basic concepts and terms, concept of production | 25-07-2016 |
| 3 | Production Functions: Meaning, Definition, Types | 01-08-2016 |
| 4 | Laws of returns:-Increasing, Constant and Decreasing | 08-08-2016 |
| 5 | Factor Product Relationship | 22-08-2016 |
| 6 | Determination of optimum input and output | 29-08-2016 |
| 7 | Factor relationship | 05-09-2016 |
| 8 | Product relationship | 19-09-2016 |
| 9 | Types of enterprise relationship | 26-09-2016 |
| 10 | Return to scale:- Meaning , Definition. | 03-10-2016 |
| 11 | Economic Principles applied to the organization of farm business. | 10-10-2016 |
| 12 | Types and system of Farming | 17-10-2016 |
| 13 | Farm planning and budgeting | 24-10-2016 |
| 14 | Risk and Uncertainty | 07-11-2016 |
| 15 | Linear programming: Assumption, Advantages and limitation of Linear Programming | 21-11-2016 |
| 16 | Importance of Farm Management | 28-11-2016 |
| Practical | | |
| 1 | To study the principle of “Diminishing Return” and to work out the optimum level of input/ output | 21-07-2016 |
| 2 | To study the cost Principle | 28-07-2016 |
| 3 | To study the principle of least-cost combination and to find out the least cost combination of two resources | 04-08-2016 |

| | | |
|----|--|------------|
| 4 | To Study the principle of Enterprise Combination | 11-08-2016 |
| 5 | To study the "Principle of Equi- marginal Return" (opportunity Cost Principle) | 01-09-2016 |
| 6 | To study the " principle of time Comparison" | 08-09-2016 |
| 7 | To study the principle of comparative Advantages" | 15-09-2016 |
| 8 | To study the farm record | 22-09-2016 |
| 9 | To prepare the Farm inventory | 29-09-2016 |
| 10 | To work out the production efficiency | 06-10-2016 |
| 11 | To compute the cropping intensity of a farm from a given information | 13-10-2016 |
| 12 | To prepare the Net Worth Statement | 20-10-2016 |
| 13 | To Prepare the Cash flow Statement | 27-10-2016 |
| 14 | To Prepare the profit and loss Statement | 03-11-2016 |
| 15 | To compute the crop yield index | 10-11-2016 |
| 16 | To study the different cost concept and work out the cost of cultivation/ cost of production | 17-11-2016 |