

Curriculum

| Sr. No. | THEORY AND PRACTICAL CLASSES |
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| 1 | Plant, Plant nutrients and Uptake of nutrients by plants Identification of different types of fertilizers, micronutrients, soil amendments etc. -K.K.Bhardwaj |
| 2 | Agro ecological situation; Soil types and Plant nutrients in soil (Primary, Secondary & Micronutrients). - K.K.Bhardwaj |
| 3 | Role / Functions of Primary and Secondary nutrients in plants and their deficiency Symptoms). - K.K.Bhardwaj |
| 4 | Role/ Functions of Micro- nutrients in plants and their deficiency Symptoms. -Rohtash Kumar |
| 5 | Available forms of different plant nutrients and related fertilizers with percentage of nutrients. - K.K.Bhardwaj |
| 6 | Inorganic Fertilizer: Types of Fertilizers based on Ingredient (Straight , Complex and Mixed Fertilizers) and based on Physical Form (Solid and Liquid Fertilizers) - V.S.Hooda - Computation of amount of fertilizer, Micronutrients on the basis of percentage of nutrient and doses for different major crops. - V.S.Hooda - Hands - On experience on calculation of fertilizer dose through Computer / Apps - Qualitative testing of fertilizers for impurities/ adulteration - Preparation of Fertilizer solution for foliar spray. - V.S.Hooda |
| 7 | Concept of Soil fertility, Soil Health and Role of Organic Manure Environmental impact of excessive use of fertilizer application Preventing measure to avoid the soil fertilizer erosion. -K.K.Bhardwaj /- V.S.Hooda |
| 8 | Different sources of Organic Manure (FYM, Green Manure, Vermicompost, Crop residue) -V.S.Hooda /R.P.Mor |

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| 9 | Production procedure of different Organic Manure/ Compost (FYM, Green Manure, Vermicompost), Crop residue management. -V.S.Hooda /R.P.Mor |
| 10 | Different Microbial/ Bio-inoculant/ Bio- Fertilizer: Rhizobium, Azotobacter, Phosphate solubilizers, Azospirillum, Blue Green Algae... , Bio-liquid manure (Panchagavya etc). –Rakesh Sahrawat |
| 11 | Method of application of different Bio-fertilizer including Doses of bio- fertilizer; Dos and Don'ts in application of Bio-fertilizer. –Rakesh Sahrawat |
| 12 | Concept of Acid Soil, Saline Soil, Sodic soil; Soil Toxicity, its effect on plant nutrition uptake; Different Soil Amendments: Lime, Gypsum; their importance and Reclamation of Soil. –Ramparkash/S.K.Sharma |
| 13 | Importance of Soil / water Testing, Soil / water Sampling techniques, Different simple Soil Testing Kits (Soil Testing Fertilizer Recommendation: STFR meter; Medha Parishak). – S.K.Sharma/D.K.Bhandari |
| 14 | Interpretation of Soil Testing Results; Soil Health Card; Determination of amount of fertilizer/manure/ lime etc, for correction/ reclamation of soil on the basis of soil test result. – S.K.Sharma/D.K.Bhandari |
| 15 | Concept of INM, Role of crop rotation, placement of different fertilizer for better Input use efficiency. –R.P.Mor |
| 16 | Rating of soil nutrient status, recommended dose of fertilizer/ manure for different Major Crops. –B.S.Duhan |
| 17 | Fertilizer Control Act-1985, its important amendments; Handling, storage and transportation of fertilizer; Function of POS machine. -Karamchand |
| 18 | Communication skills and Innovative extension tools including ICTs to reach out to farmers. – J.S.Tomar |
| Sr. No. | FIELD VISITS |

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| 1 | Exposure visit to field for Collection and processing of soil / water / leaf samples for testing and Assessing soil fertility status using STFR Meter, and test based inferences. Including visit for soil test labs, water and micro nutrients analysis labs. |
| 2 | Field visit for hands – on Experience on Application of fertilizer, Lime, Gypsum for correction / reclamation of soil on the basis of soil test result |
| 3 | Visit to Scientific compost / vermicompost / Enriched Vermi compost Units for hands-on experience on preparation of Compost / Bio - inoculum / Vermi wash preparation / Panchgavya etc. |
| 4 | Exposure Visit to Bio Fertilizer Labs and hands on experience of Bio Fertilizers for seed treatment, root dipping of sapling and soil application etc. |
| 5 | Exposure Visits to INM fields and organic farms. |