

RAJASTHAN ILD SKILLS UNIVERSITY, JAIPUR

B.VOC – B.Voc in Agriculture (BVA)

B.VOC in Agriculture Farm House Management

Third Year

SEMESTER- VI

STRUCTURE TABLE

Course Title: **B.Voc in Agriculture Farm House Management**

Semester: **Sixth**

S. No.	Paper Title	Paper Category Skill Compulsory (SC) Skill Elective (SE)	Credits			Total Credits	EoSE Duration (Hrs.)		
			Theory	Practical	Self/ Project/ Industry		T	P	S
1.	PRODUCTION TECHNOLOGY OF FRUIT CROPS	SC	3	3	-	6	3		
2.	LIVESTOCK PRODUCTION AND MANAGEMENT	SC	3	3	-	6	3		
3.	PRINCIPLES OF PLANT BREEDING	SC	3	3	-	6	3		
Total						18			

DETAILED SYLLABUS

1. PRODUCTION TECHNOLOGY OF FRUIT CROPS

- Scope and importance of fruit cultivation, nutritional, commercial, industrial and medicinal importance of fruit crops
- Fruit production scenario, state and national level, impact and economic trend with emphasis to export.
- Classification of fruits based on climatic requirements, horticultural and botanical classification.
- Mango – soil, climate, planting, high density planting, nutrient and water management, intercropping, off-season production.
- Mango- major problems, physiological disorders, pests and diseases and integrated management practices.
- Banana – soil, climate, planting, High Density Planting, nutrient and water management, inter cultural special operations.
- Banana – major production constraints – physiological disorders, pests and diseases and integrated management practices.
- Citrus - classification, soil, climate, varieties, planting, nutrient and water management, intercultural operations.
- Citrus – nutrient deficiencies, corrective measures, physiological disorders, pests and diseases and integrated management practices.
- Grapes – soil, climate, varieties, nutrient and water management, inter cultural operations.
- Grapes – nutrient disorders, corrective measures, growth regulators, physiological disorders, pests and diseases and management practices. Papaya – soil, climate, water and nutrient management, papain extraction, uses, pests and diseases management.
- Sapota – soil, climate, nutrient and water management, specific problems and corrective measures.
- Guava – soil, climate, irrigation and nutrient management, nutrient deficiencies, physiological disorders, pests and diseases, management practices.
- Pine apple – soil, climate, planting, High Density Planting, nutrient and water management, special cultural operations, pests and diseases and management practices.
- Pomegranate - soil, climate, planting, varieties, nutrient and water management, special cultural operations, physiological disorders, pests and diseases, management practices.
- Ber and Jamun - soil, climate, planting, varieties, nutrient and water management, special cultural operations, physiological disorders, pests and diseases, management practices.
- Amla - soil, climate, planting, varieties, nutrient and water management, special cultural operations, physiological disorders, pests and diseases, management practice.

2. LIVESTOCK PRODUCTION AND MANAGEMENT

- Prolusion-Significance of livestock and poultry in Indian Economy-Livestock and Poultry census - role of livestock and poultry in Indian agriculture.
- Various systems of livestock production-extensive - semi intensive- intensive- mixed.
- Integrated farming systems- role of livestock and poultry, manure management methods, duck/fish/rice culture.
- Definition of breed-classification of indigenous, exotic cattle and buffaloes - Breed characteristics of Sindhi, Kangayam and Umblacherry, Jersey, Holstein Friesian, Murrah and Surti.
- Breeding- importance of cross breeding. Signs of estrous cycle-Artificial insemination-merits and demerits.
- Housing management-farm site selection-space requirement for calves, heifer, milch animal and work bullocks-Type design of house.
- Systems of housing-Single row system-Double row system- head to head and tail to tail-merits and demerits.
- Care and management of new born calf and heifers.
- Care and management of pregnant, lactating animals and work bullocks.
- Milk-Definition – clean milk production-methods of milking – hand and machine milking. Preservatives and common adulterants of milk.
- Processing of Milk-Cooling-Pasteurization-Definition-Variou methods-Low Temperature Long Time, High Temperature Short Time and Ultra High Temperature-advantages and disadvantages.
- Nutrition-Definition-Ration-Balanced Ration-Desirable characteristics of a ration.
- Requirement and importance of green fodder, carrying capacity and forage cycle.
- Diseases-classification-viral, bacterial and Metabolic-General control and preventive measures.
- Viral diseases-foot and mouth - bacterial diseases-anthrax, hemorrhagic septicemia and black quarter metabolic- timpanists, ketosis and milk fever. Mastitis and its control.
- Zoonotic diseases – prevention and control.

3. PRINCIPLES OF PLANT BREEDING

- Classification of plants, Botanical description floral biology, Emasculation and Pollination techniques in cereals, millets, pulses, oil seeds, fibers, plantation crops etc.
- Aims and objectives of Plant Breeding- Modes of reproduction, Sexual, Asexual, Apomixes and their classification, significance in plant breeding.
- Modes of pollination, genetic consequences, differences between self and cross-pollinated crops. Methods of breeding – introduction and acclimatization.
- Selection- Mass selection Johannsson's pure line theory, genetic basis, pure line selection. Hybridization Aims and objectives, types of hybridization. Methods of handling of segregating generations – pedigree method, bulk method, back cross method and various modified methods. Incompatibility and male sterility and their utilization in crop improvement. Heterosis, inbreeding depression, various theories of Heterosis, exploitation of hybrid vigor-development of inbred lines, single cross and double cross hybrids. Population improvement programmes, recurrent selection, synthetics and composites.
- Methods of breeding for vegetatively propagated crops. Clonal selection. Mutation breeding – Ploidy breeding. Wide hybridization, significance in crop improvement.