



**Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore**  
**Shri Vaishnav Institute of Agriculture**  
**Vocational Agriculture Course**

Course Code	Course Name	TEACHING & EVALUATION SCHEME							
		Theory			Practical		Credits		
		END SEM University Exam	Mid term exam	Teachers Assessment	END SEM University Exam	Teachers Assessment	L	P	Total
GUAGRI201	Management of Beneficial Insects	50	30	00	15	05	3	1	4

**Objectives:** To study the beneficial insects with respect to its commercial use in agriculture.

**Outcomes:**

1. Student should know the rearing of beneficial insects commercially along with its use in pest control.

**Unit-1:** Importance of beneficial Insects, Beekeeping and pollinators, bee biology, commercial methods of rearing, equipment used, seasonal management, bee enemies and disease. Bee pasturage, bee foraging and communication. Insect pests and diseases of honey bee. Role of pollinators in cross pollinated plants.

**Unit-2:** Types of silkworm, voltinism and biology of silkworm. Mulberry cultivation, mulberry varieties and methods of harvesting and preservation of leaves. Rearing, mounting and harvesting of cocoons. Pest and diseases of silkworm, management, rearing appliances of mulberry silkworm and methods of disinfection.

**Unit-3:** Species of lac insect, morphology, biology, host plant, lac production – seed lac, button lac, shellac, lacproducts. Identification of major parasitoids and predators commonly being used in biological control.

**Unit-4:** Insect orders bearing predators and parasitoids used in pest control and their mass multiplication techniques.

**Unit-5:** Important species of pollinator, weed killers and scavengers with their importance.

**Practical :**

Honey bee species, castes of bees. Beekeeping appliances and seasonal management, bee enemies and disease. Bee pasturage, bee foraging and communication. Types of silkworm, voltinism and biology of silkworm. Mulberry cultivation, mulberry varieties and methods of harvesting and preservation of leaves. Species of lac insect, host plant identification. Identification of other important pollinators, weed killers and scavengers. Visit to research and training institutions devoted to beekeeping, sericulture, lac culture and natural enemies. Identification and techniques for mass multiplication of natural enemies.



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**References**

1. Vasantharaj David, B., and V.V.Ramanamurthy, 2003. Elements of Economic Entomology. Popular Book Depot, Coimbatore.
2. Ganga, G. and Sulochana Chetty, J 1997 (2nd ed). An introduction to Sericulture .Oxford and IBH Publishing Co. Pvt Ltd., New Delhi
3. Hisao Aragu 1994.Principles of Sericulture. Oxford and IBH Publishing Co. Pvt Ltd., New Delhi
4. Glover P M 1937. Lac cultivation in India, The Indian Lac Research Institute, Ranchi
5. Mishra R C 1995. Honey bees and their management in India. ICAR, New Delhi.

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