

# PESTS OF FIELD CROPS AND STORED GRAIN AND THEIR MANAGEMENT

## ASEN 3103 (2-1-0)

---

DR. NIHAL R AND DR. SUNIL  
ASSISTANT PROFESSOR  
DEPARTMENT OF ENTOMOLOGY



# Course objectives

---

- To acquaint the students about the pest infestation and type of damage caused by invertebrate and vertebrate pests such as insect, mites, slugs, rodents, birds and their management including the pests infestation in stored grains and their produce and their management

# Theory

---

## **Insect pests of field crops**

- Scientific name, order and family
- Host range and distribution
- Biology and bionomics
- Nature and symptom of damage
- Management of major pests

# IMPORTANT CROPS COVERED

---

- **Field crops:** Rice, Wheat, Maize, Sorghum, Finger millet
- **Commercial crops:** Sugarcane, Tobacco, cotton.
- **Pulses**
- **Fibre crops:** Cotton, Jute, Mesta.
- **Oil seeds:** Ground nut, Mustard, Sunflower, Safflower, Linseed, Sesamum and Castor
- **Green manure crops**
- **Polyphagous pests**
- **Non-insect pests**

# Theory

---

## **Storage entomology**

- Factors affecting losses of stored grain and role of physical, biological, mechanical and chemical factors in deterioration of grain.
- Insect pests, mites, rodents, birds and microorganisms associated with stored grain and their management.
- Storage structure and methods of grain storage and fundamental principles of grain store management.

# Practical

---

- Identification of different types of damage. Identification and study of life cycle and seasonal history of various insect pests of field crops and their produce: Identification of insect pests and Mites associated with stored grain.
- Determination of insect infestation by different methods. Assessment of losses due to insects.
- Calculations on the doses of insecticides application technique. Fumigation of grain store / godown.

# Practicals

---

- Identification of rodents and rodent control operations in godowns.
- Identification of birds and bird control operations in godowns. Determination of moisture content of grain.
- Methods of grain sampling under storage condition. Visit to Indian Storage Management and Research Institute, Hapur and Quality Laboratory, Department of Food., Delhi. Visit to nearest FCI godowns.

# Evaluation criteria

---

- INTERNAL I EXAMINATION
- INTERNAL II ASSIGNMENT AND PRESENTATION
- ATTENDANCE
- PRACTICAL EXAMINATION (WRITTEN AND VIVA)
- EXTERNAL VIVA
- END TERM EXAMINATION