Centurion
UNIVERSITY

Pests in Wheat and their management

GHUJJA WEEVIL

Tanymecus indicus

Curculionidae: Coleoptera

DISTRIBUTION:

- It is a common pest of young wheat and other crops in Uttar Pradesh, Bihar and Punjab.

APPEARANCE:

- It is grey or greyish brown weevil measuring 5 mm long.

LIFE CYCLE:

- Eggs are laid singly under clods of soil @ 80 eggs/ female.
- Eggs hatch in 15-50 days depending on climate.
- Larvae develop in soil in about 3 months.
- Adults become sexually mature by the end of October (4-5 months after emergence from soil during June-July).

SYMPTOMS OF DAMAGE:

- Adults are destructive.
- The weevil cuts and feeds on the plumule of the young seedlings.
- Older seedlings of more than 6 cm in height are not attacked. In severe cases of attack, it necessitates resowing.
- The damage results in the following symptom.

  Seedling stems severely damaged and wilted plant lying on ground.

MANAGEMENT

- Deep ploughing during April-May to destroy pupae
- Dusting the soil with carbaryl @ 10-12 kg/ac and raking it into the soil at the time of sowing is effective.

RAGI PINK BORER

Sesamia inferens

Noctuidae: Lepidoptera

- It is a polyphagous pest infesting rice, wheat, maize besides other millet crops. On wheat, damage is caused by larvae which bore into the stem killing the central shoot and causing dead hearts.
- (See pests of sorghum and other millets for other details and management)

TERMITES

Microtermes obesi, Odontotermes obesus

Termitidae: Isoptera

DISTRIBUTION:

- These are the most important pests of wheat in India and are present wherever wheat is cultivated.
- These termites are polyphagous, widely distributed in Andhra Pradesh.
- Loamy soils or sandy loams are more suitable.

- Soon after first monsoon showers winged forms (reproductive castes) leave colony for flight to select mates.
- Majority perish due to predations by birds and other natural enemies.
- Survivors alight again on the soil, shed wings and enter soil in royal pairs.
- They are confined to royal chamber at enormous depth, copulate several times and start a colony.
- These are primary reproductives.
- In case one or both royal members die, supplementary reproductives develop to run the colony.

- Queen, after fertilization enlarges in size to a length of 11 cm.
- Eggs are laid @ 30,000/day and the longevity of the queen is 5-15 years, even up to 50 years.
- Males undergo little morphological changes but become more flattened.
- Egg period lasts for 30-90 days and nymphal period 6-12 months.
- Members that develop first in the colony are workers (sterile caste) which constitute 75-80% of colony.
- Workers take care of eggs, young ones till they live independently. They feed and tend the queen.

- They forage for food and cultivate fungal gardens.
- Workers are whitish yellow, soft bodied, flat and wingless. They only are injurious to crops.
- They feed on roots, stem of growing plants, even dead tissues of plants feeding on cellulose. As a result of damage, there will be

  Wilting and drying at all stages of wheat crop

  Plants may succumb
- Soldiers (sterile caste) can be readily identified with powerful mandibles and are found at damaging site.

MANAGEMENT

- Locating termitarium, digging out queen and destroying is the only permanent remedy
- Fumigation of ant hill with carbon disulphide or chloroform mixture ·
- Destruction of crop residues which form sources of infestation
- Seed treatment with chlorpyriphos @ 6 ml/kg of seed
- Soil application of chlorpyriphos 50 EC @ 10 ml/l as a soil drench at sowing time in termite prone soils.

Worker termite

Soldier

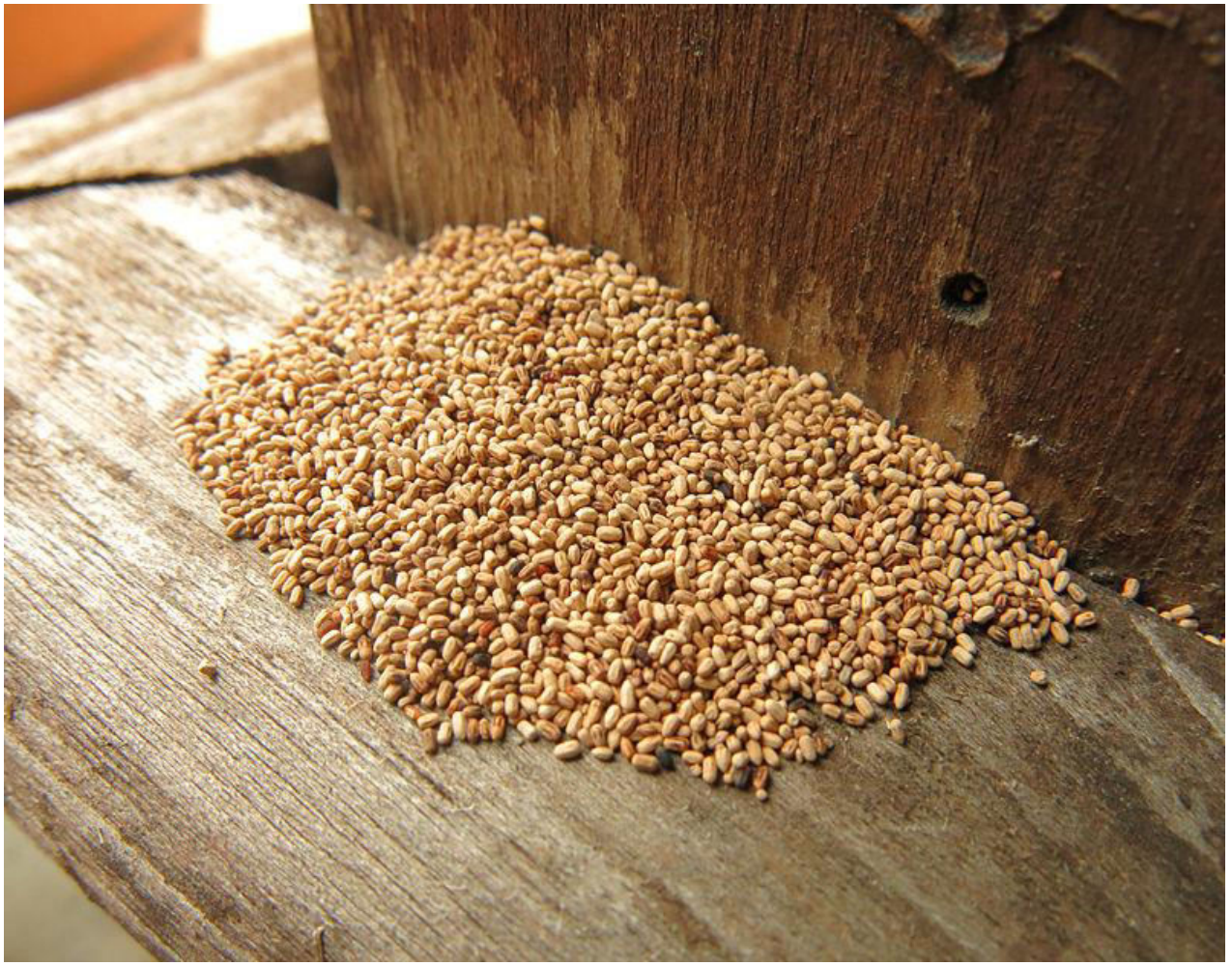
Fertile termite queen

Nasute termite soldiers on rotten wood

A young termite nymph

Alates swarming in spring

Termite fecal pellets



Termite mounds

Thank you