

Pest management- Lecture-2

B.Sc. Part- III

Wheat pests

Wheat is an important cereal cultivated all over the world. It belongs to family Poaceae. It is the name given to several plants in the genus *Triticum* including *Triticum aestivum*, *Triticum compactum*, *Triticum spelta* and *Triticum durum* etc. These are annual or biennial grasses grown primarily for their grain.

Wheat species possess an erect smooth stem with linear leaves that grow in two rows on either side of the stem with larger 'flag' leaves at the top of the stem. The stem terminates in a spike that is made up of individual spikelets, each possessing 3–9 florets. The wheat fruit develops within the spikelet, maturing to a seed (kernel). Wheat can reach 1.2 m (4 ft) in height and like other cereals, has been developed into different varieties that are adapted to planting at different times of the year.



World trade in wheat is greater than for all other crops combined. Globally, wheat is the leading source of vegetable protein in human food, having a higher protein content than other major cereals, maize (corn) or rice.

Nearly 2 dozen of insects harm them, insects pests like aphid termite, army worm pink stem borer, pod borer and Ghujhia weevil attain the status of pest. These damage wheat crop from sowing to maturity stage.

Important wheat pests-

1.The wheat stem borer

The adult stage of wheat stem borer is moth. The size ranges from 2 cm. to 2.5cm and width 5mm to 8mm. It is white in colour. The moth lays eggs on the lower surface of the leaves in compact clusters. The eggs are small, round and white in colour. The egg hatches into caterpillar whose size ranges between 2.5 to 3 cm. The caterpillars have brown head and pinkish body. The caterpillar bores the stem of the wheat plant and feeds in the centre of the stem. After that the plant dies and new shoot develops on the base.

The wheat stem borer is polyphagous. It is spread all over the country specially in the wheat growing regions.



2.The Gujhia weevil

The adult gujhia weevil is small and brackish in colour. Length ranges from 4mm to 8mm and width from 2 to 3 mm. It lays eggs in the soil the larval and pupal stage are also spent in the soil but the adult stage creep to reach the plant. It start damaging the aerial part of the plant. The larval stage also damages the roots.

It is a polyphagous pest distributed all over the country specially in wheat crop dominated regions.

Pests of Wheat (*Triticum aestivum* Linnaeus)

- ◉ Termites:
Odontotermes obesus Rambur
Microtermes obesi Holmgren
- ◉ Stem-borer, Sesamia inferens Walker
- ◉ Gjuhia weevil, Tanymecus indiosus Faust
- ◉ Thrip, Anaphothrips flavicinctus Karny
- ◉ Armyworm Mythimna unipuncta Haworth
- ◉ Wheat aphids: Schizaphie (Taxoptera) graminum Rondani Rhopalosiphum maidis Fitch Sitobion avenace Fabricius
- ◉ Surface grasshopper, Chrotogonus trachypterus Blanchard
- ◉ Cutworms
Agrotis ipsilon Hufner
A. flammatra Schiffer-Mueller