Lecture No. 1. **PESTS OF RICE- SUCKING PESTS**

1. **Thrips,** *Stenchaetothrips biformis,* Thripidae, Thysanoptera

Symptom of attack: Affected nurseries present a **pale yellow colour with brown tips**. On passing the wet palm over the top of the seedlings a large number of black adults and yellowish nymphs may be seen striking to the palm. The infestation invariably disappears after sharp showers.

Nature of damage: Both the adults and nymphs lacerate the tender leaves and suck up the plant sap. As a result fine yellowish lines or **silvery streaks** are seen on the leaves. Later, the leaves curl longitudinally and begin to dry from the tip downwards. In severe cases, the **entire nursery may dry up** and fail to produce seedling. Sometimes transplanted crop is also affected in the early stages.

Life stages

Egg: Eggs laid singly in the tissues of the tender leaves on the sides facing the stem. Eggs are hyaline and turn pale yellow as they mature.

Nymph: Newly hatched nymphs are transparent but turn yellowish white after the first moult and possess darker legs, head and antennae.

Pupa: Pupation takes place inside the rolled leaves and appendages and wings are clearly visible.

Adult: Adult is 1 mm long, dark brown to black in colour with fringed wings. Male is smaller, more slender than female. It reproduces parthenogenetically since males are seldom seen in the population.

2. **Green leafhopper,** *Nephotettix virescens* , Cicadellidae, Hemiptera

Symptoms of attack: Affected plants become pale yellow in colour and get stunted in growth. If the plants are tapped large number of leafhoppers may be seen jumping to water.

Nature of damage: Both nymphs and adults **suck the plant sap** from the leaf and leaf sheath. (It is a phloem feeder. Amino acid content is high in phloem sap than xylem. The xylem and phloem vessels are plugged with their stylet sheath that causes disruption in the transport of food substances in the vessels.) Mild infestation reduces the vigour of the plant and the number of reproductive tillers. Heavy infestation causes withering and complete drying of the crop. Plants are **predisposed to fungal and bacterial infection** through feeding and ovipositional punctures. Nymphs and adults exude sticky, whitish honeydew, which attracts **sooty mould** (that reduces the photosynthetic rate). It also **transmits plant diseases** such as dwarf, transitory yellowing, yellow dwarf and rice tungro virus (Tungro is transmitted during short feeding period).

Life stages

Egg: Greenish transparent eggs are deposited in the midrib of leaf blade or sheath of rice or green grass. They are laid in batches of 10 to 15 arranged in a single row.

Nymph: The nymphs are soft bodied, yellow white in colour. Gradually the colour changes to green.