**Tungro**

How is tungro disease initiated in the field?

- Green leafhoppers (GLH) that have acquired the viruses (rice tungro bacilliform virus or RTBV and rice tungro sperical virus or RTSV) after feeding on infected plants, stubbles or volunteer rice in nearby fields
- Infected seedlings transplanted in the field
- New growth from infected stubbles not effectively plowed under

**Symptoms**

- Mottled young leaves
- Older leaves are yellow to yellow-orange
- Stunted with slight reduction in tiller number

**Cultural Management**

1. Plant in synchrony in large contiguous areas. This reduces population of vector insects and inoculum sources. Planting should be timed when the insect population is at its lowest.
2. Destroy stubbles right after harvest. Plowing and harrow the field to eradicate GLH and tungro hosts.
3. Roguing could help reduce tungro incidence but is not effective if incidence is already high.
4. Direct seeding. Tungro incidence is lower in direct-seeded rice than in transplanted rice.
5. Examine the distribution of diseased plants; look for the presence of GLH; observe neighboring fields; and remove suspected plants.
6. Plant resistant varieties — use a resistant variety. Choose the variety based on the occurrence of the disease during the previous cropping season. Resistant varieties delay disease development, thereby reducing yield loss and sources of infection.
7. Observe a fallow period of at least one month between each cropping. This will help reduce the pests’ food supply thereby reducing their populations.
8. Use insecticides only when needed — Do not spray in seedbed when no tungro and few GLH are present. Insecticides should not be used repeatedly over long periods to maintain natural enemy populations and preserve natural balance of insect populations.
9. Remove infected plants once disease is detected. Burn or bury infected plants.