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## How to manage Stem Borers

1. Know the population peak of yellow stem borer in your place and avoid planting when stem borer population is high. At PhilRice CES, for example, the population peaks of stem borers are from April to May and from October to December. Hence, planting should be done in December-January for the dry season and June-July for the wet season so that the crop will be harvested before the peak of stem borer population.
2. Maximize the use of biological control agents such as parasitoids, predators, and microbial agents.
3. Rice plants can compensate for stem borer damage at vegetative stage by producing more tillers; hence, insecticide application may not be necessary during vegetative stage.
4. Harvest the plants at ground level to remove stem borer habitat.
5. Plow and flood the field immediately after harvest to kill larvae and pupae inside the stubbles.
6. Raise the level of irrigation water periodically to submerge the eggs deposited on the lower parts of the plant.
7. Apply Nitrogen fertilizer in two splits, following recommended rate and time of application. High N rate increases crop duration and susceptibility to stem borers.
8. Stem borers are difficult to control with insecticides because the larvae and pupae are inside the stem and they have overlapping populations in the field. Proper timing of insecticide application is critical to stem borer control.
9. To determine if insecticide is needed, check the population of adults and egg masses in the field.
  - Observe the abundance of adults attracted to lights before and after transplanting.
  - Collect egg masses from the field. Place these in covered vials or glass jars with a moistened paper. If 30% of the egg masses are parasitized, i.e., parasitoids emerge from the eggs, no insecticide is needed because the parasitoids can control the pest. If 70% of the eggs hatched as larvae, apply insecticide 1-2 days after the collected eggs have hatched.



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Source: Field Operations Manual, PhilRice, 2007.

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