

Conservation of natural enemies in paddy field

Recognize the problem

Farmers highly depend on pesticides to manage pests of rice. This habit kills not only pests, but also natural enemies in the field who feed on the insect pests. Natural enemies keep insect pest populations under control. If we conserve natural enemies they will manage insect pest populations below injury level. There are different kinds of natural enemies in rice fields. In this factsheet we focus in predators and parasitoids.

Background

Most farmers burn the ratoon crop and straw before land preparation which destroys natural enemies. During the season, applications of pesticides also kill natural enemies. Modification of the environment by supplying alternative foods and cautious application of pesticides helps to conserve natural enemies.

Management

Avoid burning the field before land preparation to help protect natural enemies. To conserve natural enemies in between two seasons, keep the ratoon crop (if it doesn't pose a disease threat). Vegetation on bunds must be maintained to provide food and shelter. Adjacent vegetation habitats are also important to the sustainability of the natural enemy populations. It is advisable to plant some legumes on bunds to provide food for parasitoid adults.

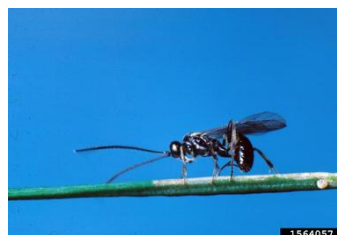
Once the land preparation starts, only vegetation on bunds are available as food and habitat for natural enemies. Therefore, this vegetation should not be removed from the bund completely. Alternatively, small straw heaps on the bunds can also help conserve natural enemy populations. Grasses and other vegetation adjacent to rice fields serve as habitats for natural enemies.

During the crop season, only apply a chemical when it is actually needed. Spot applications of pesticides are a better approach to conserve natural enemies.

Burning before land preparation is bad habit (Plant Protection Service).



Ichneumonid parasitoid wasp.
(Photo by Roger Ryan, USFS PNW Station, Bugwood (CC BY-NC))



The recommendations in this factsheet are relevant to: Sri Lanka



Authors: M UP Jayasundara, K RD Gunapala
Department of Agriculture, Plant protection service
tel: +94812388316 email: ppsdoa@gmail.com

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