Planthopper outbreaks in Malaysia

by
Mohd Norowi Hamid
Senior Pincipal Research Officer
Strategic Resource Research Division, Malaysian Agricultural Research and Development Institute (MARDI)
posted on 26 January 2009


Hopperburn in Malaysia. Photo credit: Norowi

In January 2009, more than 200 ha of rice field in northern part of Malaysia are seriously infested with hopperburn caused rice planthoppers. About 400 farmers are directly affected and their plight has been highlighted on TV and newspapers. I visited one the heavily affected areas and interviewed some farmers. They have seen small patches of hopperburn in previous years but the have not experienced such heavy attacks.

Another farmer had sprayed several times with different kinds of insecticides but they did not seem to work as the problem intensified. Farmers usually gets about 7 tons per hectare in this area but many will only harvest 2 tons because of heavy hopper attacks.

Hopperburn seems to occur along strips that were possibly sprayed. Photo credit: Norowi

Several weeks ago planthopper outbreaks occurred in a Tanjung Karang, located near the coast about 200 km north-west of Malaysia's capital, Kuala Lumpur. Rice cultivation here is extremely intensive, with high chemical inputs. Nitrogenous fertilizer inputs usually exceed 200 kg per hectare and insecticides are applied routinely at least 5 times a season. Reports from a multi-locational breeding trial all the hybrid lines were very badly affected. Insecticides were applied weekly with a total of more than 10 sprays. Insecticides used included imidachlorprid, fipronil, and thiamethoxam (actara).

This is extremely worrying as in Malaysia's Rice Security Project, where the goal is to achieve 10 tons per hectare on average, intensive chemical applications are recommended. Hybrid is now strongly promoted by the private sector and they tend to advocate high use of fertilizers and pesticides to achieve the expected yields. Such intensive practices affect the ecosystem services badly, such as natural biological control, thus making crops vulnerable to secondary pests such as the planthoppers.