



Farmers' Response to Brown Planthopper/Virus Outbreaks in Central Thailand FGD Report

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FGD details

Starting at the launch of the planthopper control campaign, “D-Day Big Cleaning, Lock and Seal” in Khampaengphet on 28 December 2009, we conducted four focus group discussions (FGDs) involving 60 rice farmers in four provinces – Khampaengphet, Chainat, Singburi and Ang Thong.

Date	Province/Village	No. of participants
28 Dec 2009	Khampaengphet	8
	Chainat- Ban Yai, Po-Ngarm subdistrict, Sanburi district	8
29 Dec. 2009	Singburi – Ban Po Chai	18
	Angthong - Huayratchakam	26



Thai agriculture Minister torching the BPH model



Spraying demonstrators at launching area



Rice Department DG Prasert Gosavitra



Local women farmer perform traditional welcome



Rice farmers attending the D-Day launch in Khampaengphet



Khampaengphet focus group discussion inside a van



FGD with Chainat rice seed grower group



Chainat focus group participants

The brown planthopper problem in central Thailand

In May-June 2009, small areas of planthopper outbreaks were reported in a few areas. In July, the Department of Agricultural Extension (DOAE) has recorded that 7,000 ha were infested with high populations and 135 ha totally destroyed in the Suphan Buri, Ang Thong and Chainat provinces. In September 2009, the Rice Department launched an information campaign to inform farmers about the planthopper outbreak. By December 2009 hopperburn and virus infections have become rampant and this prompted the Ministry of Agriculture to launch the D-Day campaigns between 28 and 30 December to “eradicate” BPH. Today many of the rice areas, especially those in seedling stages in 18 provinces are at risk to losses due to BPH and virus infections.

Farmers’ production losses

Farmers with hopper damages suffered between 10 to 70% loss in yields. Most farmers had sprayed their crops 5 to 10 times. In Khampaengphet, most farmers in the focus group had taken pesticides on credit from the pesticide shop which usually charged 3 to 4% interest per month. In Ang Thong farmers obtained 50,000 baht for production loans from the local banks at 6% yearly interest to buy pesticides. One farmer said that 50,000 baht was not sufficient for his production expenses on 29 rai or 4.64 ha (1 ha=6.25 rai). He produced only 3.4 t/ha and sold it at 7,500 THB (USD 227) per ton.

Farmers’ pesticide use

Most of the farmers had no clear idea about the action of insecticides and relied on the pesticide shop for advice. In Khampaengphet, farmers sprayed insecticides at 30 DAS to prevent stem borer attack. Farmers thought that if they had not sprayed at that growth stage, they would surely lose up to 40% of their crop to stem borers. At 60-70 DAS, farmers applied buprofezin, fenobucarb and abamectin at 7-day intervals or a total of more than 10 sprays per season as recommended by pesticide shop sellers.

Singburi farmers applied bio-extracts and sprayed insecticides once every week with fenobucarb and buprofezin at the early crop stage. Chlorpyrifos was applied again 10 days after the first spray at 30 DAS, then at 50 and 60 DAS to control the leafhopper. We asked farmers to show us the bottles of pesticides they have been using for BPH and except for BPMC, the rest were rotenone, cypermethrin, abamectin and diazinon. According to the pesticide shops, rotenone can control the eggs. These insecticides instead have caused the hopperburn outbreaks because they are extremely hazardous to hymenopteran parasitoids, bees, spiders and aquatic animals (even fish) which form the foundation of the natural ecosystem services that can provide protection from the invading BPH.



Singburi farmers in focus group discussion



Bio-extracts used by farmers for BPH control

Likewise, in Huayratchakam in Pothong district, Ang Thong province, farmers applied rotenone, fenobucarb, triazolfos, diazinon and deltamethrin, all recommended by the pesticide shop seller. However, many farmers found that the intensive insecticide sprays did not solve their planthopper problem but put them into heavy debt with the pesticide shops. As the focus group was conducted on the launch of the D-Day campaign, farmers who lost their crop from the outbreak expected subsidy from the government to recoup their losses.



Ang Thong farmers in FGD



Farmer inspecting a rice plant infected with grassy stunt virus

Farmers' knowledge of pests and natural enemies

Many farmers in the focus groups had attended IPM – FFS but they admitted that they no longer applied their FFS-gained knowledge on pest management. While they were aware of natural enemies, they didn't seem to practice conservation of natural biological control. The farmer seed grower group of 30 in Chainat was an exception. They had continued to use bio abstracts and beauvaria as their primary pest control methods. It appeared that this group has been supported by an enthusiastic agricultural technician (Kaset Tambon) with close ties to the Chainat Rice

Seed Center. The group also confined their BPH control to using buprofezin. Of the 7 farmers we met in this community, only 2 had hopperburn in small patches. They said that farmers outside the group suffered heavy damages and had sprayed their crops > 6 times.

Rice varieties planted

Most farmers in the focus groups had used three varieties, Pathum Thani 1, Supan Buri 3 and Chainat 1. They had continued planting them for > 5 years and had not changed because they commanded higher selling prices. Farm gate prices were apparently about 20% lower for varieties other than Pathum Thani 1 and Chainat1. Some had started to change to RD 31 last season. Heavy hopper damages occurred on Pathum Thani 1 and Chainat 1 with RD 31 suffering less. In late November about 300 farmers lined up in the Chainat Seed Center to buy RD 31 seeds, but supplies were inadequate. In Sing Buri, authorities introduced RD 31 to farmers last season but had poor acceptance.



Farmers waiting for their turn to buy RD31 seeds at Chainat Rice Seed Center



Chainat 1

RD31

Farmers' reasons for pest outbreaks

Farmers attributed the BPH outbreaks to intensive cropping, increase in pesticide use, continuous planting of few varieties on a large area for too long, and weather (elevated temperatures). When asked why pesticide use has increased over the last few 2 years, they responded saying that the pesticide salesmen were more active and came around to see them more frequently.

Farmers' plans next season to avoid BPH attacks

Most farmers said they would try to change or diversify their variety to RD 31 or 41 which are said to be moderately resistant to BPH, continue to monitor their crops, and when BPH arrives, use beauveria or start spraying, and delay planting time from October to November. Singburi farmers who suggested delaying planting as an option, added that they would consult the irrigation office if they can change the irrigation water distribution schedule. Khampaengphet

farmers expressed that they had learned their lesson that excessive insecticide spraying will not reduce the high BPH population and would merely put them back into heavy debt again. They said that they would cut down their insecticide use but as the D-Day launching focused on insecticide use with the Agriculture Minister, clad in a spraying suit, demonstrating how to spray insecticide in a nearby rice field and distributing bottles of buprofezin, it is likely that last season's lesson will suffer the same fate as their IPM-FFS knowledge – information bits embedded in distant memory.