



## Extension Officials' Responses to Brown Planthopper/Virus Outbreaks

### FGD Report

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#### FGD details

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Venue: Southern Regional Plant Protection Center, Long Dinh, Tien Giang province

Duration: 2.5 hours



#### The rice virus problem in the Mekong Delta

In the last three years, rice production in the Mekong Delta was vastly affected by outbreaks of virus diseases carried by the brown planthopper (BPH) which caused a loss of about 400,000 tons (or 1.1 percent of Vietnam's total production). Vietnam's rice exports were threatened and the infestations prompted officials and farmers to spray insecticides in excess in attempts to

control the spread of the viral diseases, which, consequently led to a high usage of insecticides. Such practices can disrupt ecological balance and consequently increase BPH development rates. The virus problem could spread north and west from the Mekong Delta, which might affect rice production in Cambodia, Laos, and central and northern Vietnam.

A scoping study conducted to identify research and implementation issues related to management of the brown planthopper/virus problem in rice in Vietnam showed that decisions on control are seen by various stakeholders differently (Escalada, Heong and Huan, 2008). Extension officials want the pest controlled over a large scale and would adopt what researchers might call "unscientific" methods. They would use methods that researchers might call less scientific but can work over a large scale. On the other hand, policy makers would like to ensure absolute control or seen to be doing a great deal to help farmers for the longer term goals of ensuring food security and maintaining political stability. Thus, immediate response like making emergency funds available will be an important decision.

In February 2009 we conducted a focus group discussion with 15 directors and officials of the provincial departments of agriculture and sub-plant protection departments in Long An, Tien Giang and Vinh Long provinces in the Mekong Delta to understand how they make decisions in response of pest outbreaks. It appeared that they rely more on procedural rationality and they often displace substantive rationality. Procedural rationality is about the rationality of the procedure used to reach a decision, while substantive rationality is about the rationality of the decision itself (Simon, 1982).

### **Reporting of pest outbreaks**

When a planthopper outbreak occurs, the sub-PPD technicians inform the plant protection stations and announce it to farmers on television and radio and report it by phone and letter to these officials -- the directors of the sub-PPD, the Southern Regional Plant Protection Center (SRPPC), the provincial Department of Agriculture and Rural Development (DARD), and the vice-chairman of the People's Committee. The letter is faxed to the plant protection stations and various departments at the provincial level. The reporting process takes a day.

In turn, the provincial directors then verify the planthopper situation and ask the sub-PPD to draw up a plan to control planthoppers. This process takes two days. Each province has a steering committee (SC) on BPH control which is chaired by the vice chairman of the People's Committee. The sub-PPD director, who is also a committee member, presents the plan to this committee. Drawing up the plan and presenting it to the committee takes up three days. The steering committee action on BPH control invariably involves applying chemicals, determining the amount of pesticide subsidy, the area affected and amount of pesticides needed. Each SC member goes to the district in the outbreak area to instruct the farmers on how to control BPH.

Each year, the provincial Department of Agriculture and Rural Development allocates a budget for emergency pesticides that will cover one-third of its agricultural production area. In Tien Giang province, the annual budget for emergency pesticides in store costs the local government about VND 4-5 billion (USD 286,000). If no pest outbreak occurs, the pesticides are stored for future use and if unused after two years, the pesticides are returned to the chemical company.

The company accepts the pesticides as it is stipulated in the letter of agreement with the Department of Agriculture and the chemical company.

### Policy decisions in response to pest outbreaks

From the field level, outbreak information is sent to the top, generating some policy options, as follows:

Level	Policy option
Sub-PPD technician ↓	Selects which pesticide to use and give to farmers
Southern Regional Plant Protection Center ↓	Determines area affected and no. of liters of pesticide needed
Provincial Department of Agriculture and Rural Development ↓	Decides on pesticide release from store Request the government for more pesticides
Chair, Provincial Steering Committee ↓	Decides when to distribute pesticides
Plant Protection Department –vice DG ↓	Allocates spending on activities
Plant Protection Department – director-general ↓	Requests for emergency fund and allocate expenditure
Vice Minister of Agriculture ↓	Endorses budget allocation
Prime Minister	Releases emergency fund

**Figure 1. Policy decisions in response to pest outbreaks**

Figure 1 shows the flow of plant protection policy decisions during a pest outbreak that we discerned from our FGD with extension and plant protection officials in Tien Giang province. From the time the pest outbreak is first reported by the plant protection technician, it takes about two months for the government to release the emergency funds requested. By the time the funds are released, it is often too late as the rice crop will have already been damaged by the planthopper/virus infestation.

### Farmers' and pest outbreaks

Extension and plant protection officials noted that when there is an outbreak, the farmer expects the technician to advise him on how to control the BPH problem. The farmer, likewise, expects the director of the plant protection station to provide him with pesticide subsidy, even for fungicides. One provincial agriculture director expressed that when farmers ask for unnecessary

pesticides, they often advise farmers not to spray. Sometimes, they send pesticides to farmers before an outbreak occurs.

### **Pesticide distribution**

When the provincial steering committee has decided to distribute pesticides to farmers, the mode of distribution follows this sequence:

- 1) The plant protection station staff brings the pesticides to the farmers' group
- 2) The plant protection technician inspects the farmer's field to confirm the existence of a pest problem.
- 3) If the BPH problem is confirmed, the pesticides are delivered to the farmer's house.

Pesticide distribution problems have been noted by one plant protection official. He said that in Tra Vinh province where the government has declared giving 2 liters of pesticide for every hectare of rice farm, this issue of equitable distribution of pesticides to farmers has cropped up. Since many farmers did not own a hectare of land, it was difficult to split the chemicals.

Most farmers also spray insecticides on top of the rice canopy which makes the pesticide application ineffective. "It is like throwing money outside the window," noted one extension official. "Improving farmers' knowledge and skills on how to apply pesticides will save scarce financial resources," he added.

### **Driving forces**

A plant protection official narrated how the recent BPH outbreak and pesticide advertising have pushed farmers to apply pesticides. Farmers often use mixtures because they want a quick knock down effect. However, the more they sprayed insecticides, the more the BPH could not be controlled. Besides the farmers' psychological fear of losing their crop and the pesticide companies' aggressive marketing efforts, the MARD guidelines, recommending pesticide application when there are 3 BPH/tiller, also encourage chemical use.

### **Cognitive dissonance**

While most plant protection and extension officials know that planthoppers are insecticide induced, their main response whenever an outbreak occurs is limited to insecticide distribution as it is expected of them by their bosses as well as by farmers. They have to be seen as doing something to control the BPH through pesticide distribution to farmers, although many of them acknowledge that applying more sprays will worsen the situation. There appears to be a disconnect between what plant protection officials know from scientific research and what they had to do in order to protect their "chair" or positions. There is cognitive dissonance among the plant protection officials. They noted that the lack of political will to deviate from the societal norm of insecticide use also occurs even at the higher levels of government where officials know that pesticide use is not necessary for BPH but "they do it differently."

One provincial agriculture director also admitted that in a hypothetical situation where the pesticides in storage might not be used if there has not been a pest outbreak for many years, he still would have to convince the People's Committee vice-chairman to keep the pesticide subsidy budget. This, he said, was needed because if a BPH outbreak occurs and there were no pesticides in store, he could lose his job.

### **Future opportunities in responding to pest outbreaks**

Extension and plant protection officials were optimistic that there is scope in improving PPD/MARD responses to outbreaks in the future. Such opportunities will involve:

- 1) Organizing farmers' groups and letting the group decide to deal with a pest outbreak instead of dealing with individual farmers.
- 2) Passing legislation to regulate pesticide advertising
- 3) Using 40% of the VND 4-5 billion emergency pesticide budget for outbreak prevention activities such as extending the ecological engineering efforts in Cai Lay district to Cai Be district in Tien Giang province.
- 4) Promoting gradual diffusion of ecological engineering to other areas in the Mekong Delta.