



Project location:  
5 provinces of Cambodia

Project start date:  
1 October 2009

Funding source:  
AusAID 41%, Pupuk Alam 59%

Total grant funds approved:  
A\$873,100

Updated December 2012

## Pupuk Alam – Organic Fruit Fly Baits In Cambodia

### ABOUT PUPUK ALAM

Pupuk Alam Sdn Bhd is a Malaysian fertilizer company based in Kuala Lumpur. Pupuk Alam in partnership with Griffith University in Australia developed an organic fruit fly bait using yeast waste from breweries. Trials on the bait in Vietnam showed excellent results and with bait producing plants in Malaysia and Indonesia, Pupuk Alam is growing its markets in countries across Asia.

### THE PROJECT AND HOW IT WORKED

Based on this success in Vietnam, Pupuk Alam sought an ECF grant to assist with setting up a production facility and introducing the bait to farmers in Cambodia.

This project tackles a real barrier to expansion of the fruit industry in Cambodia in an environmentally friendly and cost-effective manner. Broad spraying of insecticides is more expensive than the bait equivalent and can cause both environmental and health problems. This innovative method:

- improves incomes for rural families throughout Cambodia
- creates farmer and education training guiding crop hygiene and management from provincial departments of agriculture
- is attributed to a 55–65% reduction in loss of crop from fruit fly (bringing crop loss from fruit fly to as low as 5%)
- provides an alternative to environmentally damaging pesticides, reducing the amount used in fruit orchards and as a result provides health benefits for farmers and their families.

Pupuk Alam has worked closely with donor supported agricultural projects including Food and Agricultural Organisation and the Department of Agriculture to maximise broader impacts. Pupuk Alam also established relationships with non-government organisations such as the Cambodian Women for Peace and Development in developing supply chain approaches.

### THE RESULTS

- To achieve their results Pupuk Alam has had to overcome some challenges with the implementation of the project. Farmers are highly dependent on their produce and are often confronted with new products from a range of companies. Over the program 5,300 training sessions were held with farmers on using the protein baits

- As at mid-2012, there were 521 farmers using baits in the district. Those that have tried it are the entrepreneurial type farmers, which are generally less likely to be poor.
- To increase outreach, Pupuk Alam commenced wide area trials in 19 mango farms in one area to showcase the long term effect of using baits.
- Previously farmers were experiencing between 80-90% damage from fruit fly borers and were using pesticides to deter flies. Over the trial, the farmers reported seeing less spoilage of fruit and the reduced costs of using baits rather than pesticides. Fruit fly baits set up to monitor the population of flies in the area found a decreased occurrence of fruit flies across the whole community as more farms participated.
- In Phnom Penh, 10 men and women have been employed both full and part time in the bait production and head office.
- Local production of the baits is underway operating out of a local brewery in Kampong Chhnang and will also supply other regional markets for baits.
- Organic fruit fly baits are of particular interest to large scale plantations interested in export of fruit and in organic certification. The availability of the more effective and cheaper fruit fly baits will support a more commercial fruit industry in Cambodia – both in larger scale operations and a more commercial approach by individual farmers.
- The Food and Agricultural Organisation have sponsored large scale organic chili growing in the district of Kampong Cham and is using Pupuk Alam's baits to achieve the organic status of the chili.
- Pupuk Alam have also signed an agreement with Food and Agricultural Organisation to supply organic fruit fly baits produced in Cambodia to programs in Laos and Myanmar.

### HOW ECF FUNDS WERE USED

Pupuk Alam used the ECF grant to part finance extensive farmer training programs in all Cambodian provinces and together with ECF, will finance the production facility. Bait stocks for training programs, which allow farmers to field test the product, is supplied from Pupuk Alam's existing plants and operational cost of staff and management.