

reduced pesticide use, but has saved money by also reducing his fertiliser use. Before he used 100 grams per plant, but with a deeper understanding of the nutritional needs of his crops, he learnt that 20 grams was sufficient. He also benefits from the end product, claiming that his vegetables are healthier and taste better. Iwan enjoys taking his children to the field and teaching them the difference between beneficial insects and pests.

AGUS SOLEH, Pangalengan

Agus joined IPM in 1992. After graduating from a FFS, Agus sees various alternatives to using chemicals to control pests: better management of cultivation; different irrigation techniques; mulch; knowing when to plant which crops according to the climate, and many more.



Having understood how pesticides leave residues in the soil to be absorbed by the next crop and contaminate water, Agus has decided to plant crops that can be grown with very few inputs, such as carrots. While other farmers have killed their animals by feeding them grass and weeds from their pesticide-sprayed fields, Agus is confident that his stock grazes on wholesome pastures. Agus feels he no longer needs to rely on agricultural extensionists; he is confident of his own knowledge and judgements about his farming.

Ciamis: Farmers' Learning Science Facility (KSP)

Ciamis is a district in West Java that has many strong IPM farmer groups. There are about 23 000 IPM farmers in this area and from this group over 300 have been trained as farmer trainers.



A 'science learning' (action research) facility has been established in one of the sub-districts, Cikoneng, and farmers have:

- established a rice nursery and a field laboratory
- produced compost and organic fertiliser to sell in their own kiosk
- advocated for pesticide-free products
- experimented with different kinds of plants and fertilisers suitable for their fields
- Focused on soil fertility and identified reasons for why fertility has been decreasing

Farmers in Ciamis acknowledge that understanding the ecology of the field entails more than gaining knowledge of bugs and plants. Here farmers are learning about soil properties because they are concerned about the fertility of their fields.

The group in Rancah, Ciamis have a cooperative similar to the kiosk in Pangalengan where they sell pesticide-free rice, seeds, and compost. Farmers did comparisons between the farmers' seeds and the commercial seeds and found that their seeds were of better quality. They sell their products to other districts in the hope of encouraging other farmers to produce

pesticide-free rice and therefore, pesticide-free seeds.

Recently, farmers also organised a series of discussions with the Bupati, the Head of the District. The aim of this dialogue was to gain a common understanding between the farmers and the local government about sustainable agricultural development, and to gain support for empowering farmers. The farmers' main principles are:

- To develop critical thinking capacities to deal with agricultural and other rural socio-economic issues
- To conserve the environment which is central to farmers' livelihoods
- To use democratic and participatory principles to achieve these goals

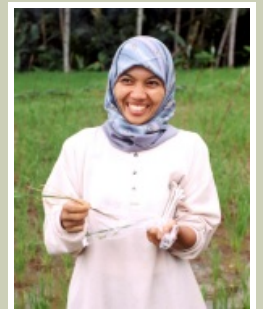
As a result of discussions with the local government, the farmers' acquired 100 million rupiah in 2001. This money will be used to support various IPM farmer activities:

- compost making and other action research initiatives, including plans for community campaigns about separating garbage into 'green' and 'plastics'
- strengthening IPM networks through regular meetings, workshops, FFSs and field activities
- holding district congress meetings for farmers to share ideas and results of their experiments and research

Farmer Profile

IIK MUDRIKAH, Cikoneng

Iik has graduated from a rice FFS and done training at the Farmers' Science Facility. Before joining IPM, Iik sprayed her crops with pesticides and used a lot of chemical fertilisers. She has experienced many benefits from IPM:



- reduced environmental, health and monetary costs, from an increased understanding of agro ecosystems, resulting in less chemical inputs
- increased knowledge about other crops, such as low-land vegetables, which she now grows and sells
- experience in training and facilitating farmer groups
- knowledge about making compost and decomposing agents from local materials (banana stems and palm flower juice) which means she no longer needs to buy the decomposing agent
- confidence about managing her own field in an ecologically sustainable manner with a greater awareness about insects, soils, micro organisms, water and much more

Like other women in Cikoneng, Iik has facilitated various field studies and encourages other women to participate. She has gained tremendous support from her family because their farming practices have also improved from Iik's experience with IPM. FFSs and field studies are very important to Iik because the soil fertility in her area is declining from years of chemical inputs. Iik sees IPM as a program that can halt this process and help protect her environment from further damage.