

From farmers' field schools to community IPM

Scaling up the IPM movement

Russ Dilts

A **people-centred IPM movement** has grown in Asia over the last ten years, and is now spreading to parts of Africa, Latin America, and the Middle East. During this period, many variants have evolved, and continue to evolve, within the specific natural and operational environments of different countries, cultures, and communities. From the first Farmer Field Schools consisting of 25 farmers each to a people centred IPM movement, which counts several millions of farmers in many countries (e.g. more than one million farmers have been trained in Indonesia alone), the IPM programme has indeed gone to scale.

Farmer Field Schools - from extension to education

The IPM Farmer Field School programme emerged out of a concrete, immediate problem. Farmers were putting their crops, their health, and their environment at severe risk through massive abuse of highly toxic pesticides promoted aggressively by private industry and government. Pest species were becoming resistant and in some cases resurgent. What was called for was a large-scale decentralised programme of education for farmers wherein they would become 'experts' in managing the ecology of their field – bringing better yields, fewer pest problems, increased profits, and less risk to their health and environment. "Grow a Healthy Crop" is the first principle of the IPM programme.

The basic framework for the educational approach addresses three fundamental learning domains (adapted from Habermas.J):

1. Technical domain of work: If one has ever seen the look on the face of a farmer who doesn't comprehend why he lost his crop, despite all his hard work, one can readily understand the empowerment that occurs when a farmer regains control based upon direct understanding. From this emerged the entire '**Farmers as experts**' approach underlying the Farmer Field School (FFS). In Field Schools farmers themselves learn to conduct experiments independently, create learning materials on their own, manage a 'field laboratory', and plan for special sessions such as 'IPM Field Days' or 'IPM Popular Theatre'. Farmers do not master a specific set of contents or 'messages', rather they master a process of learning that can be applied continuously to a dynamic situation: the ecology of their field.

2. Practical domain of interaction and communicative action:

Farmers do not work in a vacuum. Their attitudes, decisions, perspectives, and practices are greatly influenced through their interaction with their peers and community. From the outset the Field School intentionally included processes and methods that would provide such interaction. Participants work together in small groups to collect data from the field, generate analysis through discussion, present results, conduct experiments, and make group decisions for field management. For many farmers, unaccustomed to even speak in front of groups, this confidence building and process mastery is the most important outcome of their Field School experience.

Interaction skills are also addressed directly through exercises in communication, collaboration, group problem solving, and discussion/analysis techniques. The processes used for analysing social reality are in essence the same as those employed in 'discovering' ecological realities in the field. These skills are applicable not only to IPM, but also to everyday life



Members of a farmers association in Central Java reading their IPM newspaper PETANI. Photo: FAO

in the community. These skills do not come overnight, but must be practised and reinforced, and elaborated upon over time. This is assisted by the length of the Field School which lasts across an entire season and is begun with preparatory meetings which also include participatory methods of problem analysis and participant selection such as labour analysis, mapping, and joint 'learning contract' formation.

3. Domain of emancipatory action for empowerment:

Emancipatory learning is the next step, in which people examine their internal or group constraints and options as they relate to a larger social, political, economic, and ecological environment. In this sense, the initial Farmer Field School, and even follow-up activities such as Farmer-to-Farmer training, farmer action research/field studies, etc. are just 'starters' for empowerment and local institution building. Further efforts are needed to allow for the evolution of empowerment within the community. Gaining control of one's fields is a first step, but soon farmers run into forces and systems outside their immediate control that must be addressed through other kinds of action.

Going beyond Field Schools - farmers as experts

Through evaluations and case studies we found villages where the cadre of trained farmers had 'captured' their entire commu-

nity as they continued to spread and deepen IPM. However, in other locations we found that, even where good quality Field Schools had taken place, the programme had vanished with little trace. Based upon this, early in the programme a number of activities we started aimed at strengthening the roots of the programme within the community. Our goal was sustainable farmer initiative and the 'institutionalisation' of IPM at community level - this meant going beyond field schools.

- **Farmers as trainers** - We postulated that if farmers could master the process of 'discovery learning' in their own fields, they could also facilitate other farmers in their learning. The first 'Farmer to Farmer' IPM field schools emerged spontaneously. They were then built in as an integral part of the programme. Currently, nearly 50% of all IPM Farmer Field Schools are organised and run by IPM farmer trainers. Over 20,000 Field School graduates have gone on to be trained as farmer trainers and conduct Field Schools for other farmers.
- **Farmer Researchers** - Most believed that farmers would be limited to simple experiments and 'demplots'. However, in hundreds of locations farmers are currently engaged in field scientific investigations of complex local problems. Farmers are undertaking programmes previously thought impossible, such as the rearing, breeding, spreading and maintaining of complexes of bio-control agents (parasitoids, virus, bacteria) while training other farmers in their use. Now, IPM 'farmer researchers' are often invited to national research meetings on IPM to present their findings and their programs. Needless to say, researchers unfamiliar with the independence, intelligence, and diligence of IPM farmers are initially shocked.

Community IPM - from expert farmers to empowered communities

Again, we found that while this increasingly complex array of farmer-based activities was of great help in broadening and deepening IPM, the programme still resembled a 'menu' of follow-up activities and dependency upon central and provincial project funds remained high. Institutionalisation of IPM at community level had to be pursued.

- **Farmers as strategic planners and organisers** - In many locations networks of active IPM farmers had been established, and many of the functions previously done by government or NGO fieldworkers had been taken over. However, the organisers of most activities, except at village level, remained with outsiders. Within Community IPM, activities were developed that would provide trained farmers with the skills and opportunities to build their own institutions. For this, a number of different fora were initiated, at first funded by the national program. These included seasonal planning meetings for IPM farmers from villages and sub-districts. Herein farmers were trained in participatory planning methods while making actual plans for their groups, allowing plans and planning skills to be honed through interaction with other farmers. Groups were linked across communities and across villages into networks where they could discuss their plans and share experience. Farmers were also trained in methods of 'lobbying' local government and applying effective demand through organising. Once again, the farmers surprise people in their ability to develop thorough and detailed *strategic plans* incorporating problem and social analysis, 'vision', 'principles for action', strategy, tactics, and operational plans.

- **Farmer policy making** - As the 'Reformation' period in Indonesia has begun, so has IPM Farmer involvement in local politics since their networks represent one of the few organised institutions composed of true farmers. Most of these activities were focused at the sub-district level, which is seen as a '*strategic universe*' for farmer organising. In Indonesia, the sub-district is the interface between government and other services (banks, markets, etc.) and rural communities. Villages are often too small to provide the scope of institutions that farmer organisations need to interact with to improve their access to resources.
- **Institutional diversity** - An array of IPM farmer institutions has sprung up across the country. These vary from single-village focused activities to province-wide 'IPM Farmer Congresses' involving thousands of people. Some IPM farmer institutions have taken the form of networks, with meetings and leadership revolving across specific geographic areas. Others have formed more formal 'associations', some even with the official legal status of 'foundation'. Some have made close links with local government at various levels and serve as training/service agencies for government programmes. Others have linked to local political or social forces, such as Islamic organisations. In the last 6 months, some have even begun to dabble in the heretofore forbidden realm of 'practical politics', organising campaigns and getting IPM farmers elected to village head positions.

As a point of principle within Community IPM, the training, education, funding, and other opportunities and resources provided do not foresee or proscribe any specific



IPM farmers from Cikoneng in West Java analyse their soils. Photo: FAO

institutional outcome. The job of outside organisers is to provide tools, methods, skills, experience and opportunity only. It is up to the farmers themselves if they want to organise, for what, and how. At present various forms of IPM farmer organisations are still emerging, growing, dying, evolving, stalling, prospering, disappearing. Current efforts from the 'facilitators' involve bringing farmer organisers into the analytical dialogue through programmes geared to provide farmers themselves with the ability to document and analyse, to 'map' the progress of their institutional initiatives and to formulate ways to further strengthen their efforts.

- **Institutionalisation and civil society** - The goal of community IPM is the institutionalisation of IPM at community level. The Gerung case (see box p.21) provides a look at how

alumni in one sub-district in Indonesia are working to institutionalise IPM in their villages. Specific organising activities include reactivating farmers groups, organising a sub-district alumni association, and taking advantage of water users associations. The farmers groups are planning and conducting a variety of activities to help farmers overcome specific field problems. The alumni association and water user associations serve to spread the results from field studies to all farmers in the sub-district. Apparently the leadership skills of farmer IPM trainers, their ability to facilitate



A farmer field school in China. Photo: FAO

open processes and group decision-making, has been recognised by local farmers. The farmer IPM trainers have been elected to leadership positions of farmers groups and maintain prominent positions in the water user associations. Local governments have provided funds to support Field Schools conducted by farmer IPM trainers. The provincial agriculture service believes that the activities of IPM alumni will lead to a sustainable agricultural system in Gerung. And having put themselves on the local institutional/ organisational map, alumni organisations are becoming institutionalised through the legitimacy accorded to them because of their activities.

An important outcome of community IPM activities as they accomplish institutionalisation of IPM at the village level is that civil society in a given village is also strengthened. Government, non-alumni, and other local organisations are legitimising IPM and the IPM organisations being established in Gerung. This institutionalisation will influence behaviour patterns for all local organisations in Gerung. Hence, the conditions common to a strong civil society are being established. The civil society that evidently is taking root in Gerung will enable the community of farmers in Gerung to better manage the ecological and social conditions in which they live. This will in turn ensure greater stability in food production in the communities of Gerung. Community IPM leads to civil society and civil society will enhance local food security.

Keys to successful upscaling

Despite going against “conventional wisdom and conventional approaches”, IPM has grown to be a farmer-driven movement in Asia. Looking closer at the process of scaling up, some keys to success can be found:

- Trusting in people as being able and willing to take control of their lives, communities and environment and capable of dealing with the ecological and social complexities of the programme

- Having a concrete entry point addressing a multi-faceted problem
- Pressing on realising that nothing worthwhile succeeds overnight.
- Developing a shared vision through continuous dialogue and reflections on accumulated experience
- Being aware that methods and approaches are not “neutral” and allowing for human views to be incorporated
- Making efforts to push down roles which reside “at the top” as in the case of strategic planning which is now done at community level by farmers
- Giving room for leadership to emerge, be built up, shared and rotated to maximise “human capital”
- Building “social capital” by helping people to learn to organise towards achieving goals that are worthy
- Tolerating, encouraging and enjoying diversity as the stimulus for learning.

Community IPM as an entry point for Sustainable Livelihoods

For the last 10 years, IPM training programmes in Asia have been pursuing multiple objectives with considerable success - farmer empowerment, conservation of biodiversity, food security, community education, protection of human health and policy reform amongst them. These multiple objectives have arisen from a growing recognition – among governments, NGOs, donors and farmers themselves - of the interdependence of different aspects of development, and the need to put people at the centre of the development process.

These concerns have given rise to the concept of ‘sustainable livelihoods’. Within a Community IPM programmes, participatory approaches (including farmer-to-farmer training, action research and policy dialogue) are being used to transform a range of assets (including *natural, human and social capital*) into a number of livelihood outcomes, including security of incomes, food supplies and health, and improvements in rural civil society. ■

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More cases and specific information can be found at the Community IPM Website: <http://www.communityipm.org>



IPM farmers in Indonesia demonstrate for their rights. Photo: FAO

Initiatives of farmers in spreading the message

Experiences from Gerung Sub-district

IPM National Programme efforts established a critical mass of IPM alumni in Gerung. Since 1996, IPM Alumni have been organising several types of activities that, for the most part, they have funded themselves. They have been very active and creative in informing others about IPM and in establishing their own organisational network. They have forged steadily ahead in the development of a local farmer-led IPM Programme.

Farmer conducted field studies - Alumni conducted field studies have increased farmer understanding of ecological issues, to adapt and test out recommendations in local conditions, and to increase alumni confidence regarding their understanding of specific practices.

"Farmers get worried during the first couple of weeks of soybean growth because of the appearance of bean seedling flies. Although only five percent of the plants may be lost, farmers begin spraying at this time. So that we would know when and at what levels damage could be sustained without significant loss in yields my friends and I set up this study. Planting distances are also important to this issue so we have worked with the farmers of Kebun Ayu Village who are conducting a planting distance study. We will use this study to establish a set of basic practices among the farmers in our Farmers Group in the planting of soybeans."
- H.Fatuchorrohman, IPM Farmer Researcher

Alumni helping others to learn about IPM - IPM Alumni in Gerung have used all means, formal and informal, to help educate other farmers in the villages about IPM.

• **Religious training as a vehicle for IPM dissemination** - Twenty-nine year old Rusdi Aminullah, a farmer IPM trainer from Lembar Village, serves as a religious teacher at the Madrasah Nujumul Huda in his village. In the classes that he conducts he usually finds a way to incorporate IPM into his lessons.

"I don't necessarily rely upon the curriculum or the school's schedule. Every time a topic arises that is connected to the environment, nature in general, or health I discuss the basic principles of IPM with my students. I hope to plant the seed of love for the environment that was created by God for the enjoyment of humanity not for humanity to destroy. If I can plant this seed now, they will grow to appreciate the importance of nature. I would be thankful if at the very least they will be able to influence their parents."

• **Dissemination of IPM by women through informal groups** - Women often take advantage of informal situations to discuss household issues with each other. Ms. Syifa'iyah of Lembar Village, an IPM alumni says,

"I often gather with other women in the bruga (meeting place) and talk about IPM. I also teach at the Madrasah and every time we hold religious instruction for women I slip in information about IPM. I have told them that in this world, if you have rice plants you surely are going to have pests. But if there are pests, there will also be natural enemies that prey upon them. These natural enemies are there to help farmers. I have also talked about the danger of pesticides to the environment and to people."

IPM farmers organising - IPM Alumni have taken their own initiative to create a multi-tiered structure of semi-formal and formal groups. They have established an IPM Alumni Association through which the groups keep in touch with each other. The goal is to develop a system to sustain the IPM movement in Gerung. These efforts are independent of outside agencies.

• **The Bruga as the foundation for an IPM movement** - The custom of people gathering in the bruga of a household has been taken advantage of by IPM alumni to create a foundation for a semi-formal IPM network. The bruga of households are being used as meeting places for IPM discussion groups. These groups form the backbone of a farmer controlled IPM Network. According to Bachriandi, farmer IPM trainer, "Spreading information about IPM via bruga is appropriate, we farmers don't much care for formal meetings. At the bruga we can talk about IPM in a relaxed and informal manner without worrying about protocol. Farmers usually gather in the bruga in the afternoon as it starts to cool for a cup of coffee. While families have always had bruga, the role of the bruga has expanded in village life. The bruga serves a greater social purpose. With the advent of IPM an additional role has arisen for the bruga; they now serve as neighbourhood forums to support the spread of information about IPM and to strengthen the understanding of farmers regarding IPM principles. The bruga has given birth to farmers who embody the spirit of IPM. They are changing how they farm."

• **Farmer groups reorganised** - The farmer IPM trainers and other alumni in Gerung Sub-district have provided the leadership to breathe life back into inactive farmer groups. Alumni note that their FFS experience provided them with new ideas and a new perspective on how to work effectively as a group. As alumni brought new energy to their farmers groups, farmers in general learned that alumni had something new to offer both in terms of knowledge and motivation. They have helped members of their farmers groups to improve their farming practices by involving them in learning through

field studies. IPM alumni, including farmer IPM trainers, have become the heads of their farmers groups and as such the nodes of an IPM movement. Among their roles as heads of farmers groups, the farmer IPM trainers have worked to connect one farmers group with another via the IPM network that has grown up. Farmers groups have become the second tier in the organisation of an IPM movement in Gerung Sub-district. The farmers groups provide bruga discussion group members with a forum for discussing IPM issues among a larger group of farmers. Farmers groups provide a context in which farmers can plan and effectively manage a variety of activities that respond to their needs.

• **Sub district level organisation** - The next tier of alumni organisations is at the sub-district level. "Along with other farmer IPM trainers and IPM alumni we are in the process of creating an IPM Alumni Association at the sub-district level. We feel that the primary activity of the association will be to expand the application of IPM by farmers via the implementation of field studies in response to field problems identified by farmers.", says Rizalihadi, a farmer trainer involved in setting up the organisation.

• **A mega-tier** - Bachriandi and Rizalihadi have promoted a new initiative - the inclusion of water groups to form a network that is more inclusive and more extensive than an IPM Alumni Association, a collective of farmers groups, or neighbourhood brugas. The same key individuals, IPM alumni and farmer IPM trainers, are in both, but there is a potentially larger audience for IPM by including water users groups. The heads of water users groups meet regularly. This provides a forum that allows for communication amongst all affiliated groups.

"Rizalihadi and I agreed to try to expand our organising to truly cover all of the sub-district. Fortunately I am still trusted by farmers to co-ordinate the Collective of Farmers Water Users Association for Pengga Kanan and Rizalihadi holds the same position for Pengga Kiri. We will use this opportunity to spread Field Schools throughout the watershed areas of the sub-district. Wherever the watershed includes another sub-district, we will be active there as well. I get really nervous whenever I see farmers using poisons. Many farmers still don't realise that they are playing with fire. If they are unlucky they could die. We need to stop this. We, all of us farmer IPM trainers, are now actively pursuing this." says Bachriandi. The network has helped farmers groups to take a co-ordinated approach to their activities. It has enhanced the ability of farmers groups to plan and organise activities, establish methods for sharing and exchange of information.