

Courses transfer more than information. They provide examples of how information can be communicated in the learning situation. Participants on an international IPM refresher course were introduced to Non-Formal Education (NFE) in the hope that they would use this method to train IPM extension workers in their own countries.



The philosophy of IPM learning

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It is now accepted that IPM is a knowledge-intensive and location-specific process involving direct field observations, data gathering and decision making by farmers in their own fields. The inappropriateness of extension methods based on conventional methods of transferring technical knowledge in IPM programmes has been highlighted by the success of Farmer Field Schools (FFS). In emphasising a participatory approach FFS uses discovery to achieve active learning. Field ecology emerges as a holistic system involving the whole cropping cycle and not simply specific production components and farmers experiment rather than watch demonstrations carried out by extension workers or researchers. After critical testing they select from a 'basket' of options rather than adopt fixed recommendations and in this way farmers enhance their decision-making skills.

Although the FFS approach is spreading rapidly and many NGOs work with participatory extension methods, traditional learning methods are still characteristic of extension systems particularly those within national extension services. Here, in a top-down approach, the extension worker acts as an intermediary between researchers and farmers in transferring the 'new' technology generated by researchers.

For staff involved in the IPM knowledge system, working in a participatory system represents an important shift in attitude and thinking. The question is how can staff involved in the traditional, top-down knowledge system be reassured that participatory approaches are not life threatening! The answer seems to be through training courses and workshops. However, experience has shown that despite innumerable work-

shops and articles, many misconceptions still exist about the participatory extension approach. To overcome these problems the IAC extension refresher adopted the Non-Formal Learning approach and, as we explain below, it was a success.

International IPM training

The International Agricultural Centre (IAC), Wageningen, the Netherlands has been running a three-month, international course on IPM in the early 1970s. Using a variety of training methodologies, the course deals with practical, technical and scientific aspects of IPM and includes an IPM Extension module. It addresses a target audience of higher and mid-level officers concerned with crop protection and working within governmental organisations and NGOs. Most course participants come from the South.

Over the years experience has shown how difficult it is to introduce in-depth participatory extension approaches effectively into the IAC-IPM extension course. Technical crop protection specialists and extension workers tend to be more familiar with the traditional transfer of technology type of extension system. Therefore, a short, regionally-based refresher course in extension was designed as a follow up to the international IPM training course held in the Netherlands.

Regional IPM extension courses

These regional two-week Extension Development for IPM courses held in cooperation with such organisations as the International Centre of Insect Physiology and Ecology (ICIPE), Kenya and BAIF, Development Research Foundation, Pune, India.

Training trainers

The course anticipates that when participants return to their home countries they

will use their new experience to train others. The course is based on ideas developed and tested in IPM extension and training in recent years and makes an attempt to extrapolate the IPM experience to sustainable agriculture in general. IPM seems an appropriate methodological starting point when introducing sustainable practices and improving farmers' and extension workers' capacity to think in ecological terms because many of the ecological processes involved in IPM are easy for farmers and extensionists to observe.

Extension Development for IPM is based on the principles of NFE and adult education: learning through experience, experimentation, and self-discovery and building on existing knowledge and experience.

Field problem are translated into learning experiences and group dynamic exercises are an important part of this process. It is known that people tend to imitate the teaching methods used on them in the past. It is important, therefore, that course participants' experience NFE for themselves. All methods and activities used on the course are consistent with those to be used later in the participants work situation and the course itself is structured according to NFE principles.

Participants' experiences

Some participants on the refresher course showed an initial resistance to this learning-by-doing and learning-by-discovering method. They still expected lectures and more technical subjects and the fact that neither facilitator(s) nor participants were supposed to lecture was rather difficult for some course members. This problem was most evident in discussions with the farmers. Once in a while facilitators had to intervene by breaking into the lectures that developed when participants addressed farmers. In general, however, participants

showed interest in discussing opportunities and constraints with farmers and in using the participatory rural appraisal techniques when visiting their fields. It was interesting to see that participants involved with organic farmers in Kenya tried to get as much technical information as possible about growing crops according to organic principles.

Although the course was held in English, communication with farmers was in the local language. The number of participants speaking the local language on each refresher course was usually a little less than 50 percent.

In discussion sessions with farmers, translation was required but this did not appear to be present a problem. If full use had been made of PRA techniques translation would have been less necessary as visualisation strongly assists the mutual understanding of the topics introduced. In analysing the many problems confronting farmers, it was found that facilitators were needed to guide both the selection of key issues and the choice of how these issues should be approached by the extension session. An initial proposal for the extension session put forward by the course participants themselves, for example, was a series of lectures on technical subjects. The facilitators had to probe for new ideas and alternatives and then encouraged the participants to formulate these into improved proposals.

Farmers were supposed to participate as

much as possible in all activities, demonstrations, explanations, and group interactions. The techniques necessary to ensure this degree of farmer involvement were used during the course. Whilst some still found it difficult to use these methods, in their final evaluation participants showed that, in general, they were convinced of the effectiveness of the participatory extension approach and the learning methodologies it involved.

Experiences during the extension day

These extension sessions generated considerable interest although often there was some tension at the beginning. The farmers did not quite know what to expect from the group which contained several foreign faces. Course members, on the other hand, saw it as a 'day of truth', a kind of practical examination. In addition farmers were not used to the agro-ecosystem analysis. However, drawing attention to the differences between beneficials (the farmers' friends) and pests (the farmers' enemies) and the positive and negative factors that influenced crop health provided plenty of opportunity for the group to warm up. Discussions were particularly interesting when the groups presented their conclusions on the status of their crop and suggested ways in which problems could be prevented or controlled. During the extension day the field was the training material and the farmers' own observations the

groups' source of knowledge. This was clearly a new learning experience for both farmers and course participants.

Visual aids were used as much as possible and farmers reacted positively to the exercises in group dynamic exercises. They were excited to discover that their fields did not only contain 'farmers' enemies' but 'farmers' friends' as well and that using pesticides might endanger these beneficial insects. Such issues led to long discussions. In their evaluation farmers made it clear that they had enjoyed the way the sessions were organised and appreciated the approach. They were positive (and sometimes very kind) in their evaluations of the course participants and made a number of striking remarks. I conclude this article by letting the farmers' comments speak for themselves. "Today we are not told what we have to do in our crops". "For the first time in contacts with extension workers or researchers we feel that they (participants) treat us as equals". "These participants sit together with us on the ground at the same level". "We learned a lot of new things about growing our crops and trying to prevent or control the pests".

"We did not know that we have friends (parasitoids and predators) in our crops, helping us to control the pests." (This remark was also made by a group of organic farmers in Kenya!); "When can we have a next field day. We want to go and try to implement new ideas".



Rope game, a group dynamic exercise

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A more detailed version of this paper is available from ILEIA on request. Please contact the author directly for details of the 'Extension Development for IPM' course.

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