



*Farmer explaining
PTD results.*

have started to identify solutions to related problems such as making silage from fodder legumes and trials to adapt shipita to different locations and altitudes.

During PTD activities it became clear that women possessed important knowledge and capacities when it came to designing and implementing experiments. Women were the carriers of most of the knowledge relating to local herbs and to their usefulness as botanical pesticides. They understood the specific characteristics of different varieties of plant material and were well aware of the treatments locally available for livestock disease. Better use should be made of this specific knowledge.

Farmers, scientists and NGOs

The experiments can be considered as a convergence between formal science and farmer knowledge. At all stages of the PTD process farmers worked closely with NGO staff and researchers from the various agricultural research organisations involved. The joint analysis of the causes and effects of the major problems laid the ground for a common understanding. The presentation of researcher-identified options, such as newly introduced fodder legumes, demonstrated the farmers the important role scientists can play in providing alternative solutions. Scientists can also provide the analytical tools to confirm experimental findings such as the laboratory tests carried out to determine the incidence of liver fluke in treated and non-treated animals.

PTD has facilitated a shift in how NGO partners approach farmer priorities. Instead of focusing on their own agendas, NGOs saw how PTD farmer-workshops brought farmer priorities to light that had not been identified in NGO programmes. It was clear from the beginning that focusing experiments on LEISA alternatives reflected farmers' needs and requirements.

PTD: long-term relationships

PTD experiments showed that there was still considerable scope when it came to finding alternatives to the conventional solutions presented by government agricultural research and extension. Most of the partners involved wished to develop their PTD capacities further and integrate PTD into their operation plans. The Peru experience shows the importance of training staff in government institutions to encourage a wider application of PTD at this level. It was recognised that PTD is a process that requires more time than a few cropping seasons. Creating networks among different types of institutions involves long-term relationships.

Results and impact of the PTD process

After two years of learning, experimenting and sharing results, the stakeholders in the PTD process examined the extent to which they had achieved the goals they had set themselves in 1997. The farmers, NGO staff and researchers who participated in the research programme assessed its impact and results in the following way.

Farmer' capacities strengthened

The majority of farmers showed a keen interest in experimenting, monitoring progress and assessing results. They organised themselves in groups to share and discuss the results and many now wish to go on conducting new experiments. A major attraction for both individuals and groups is having the opportunity to compare different options and learning moments. It strengthened the confidence of farmers in their own ability to find solutions. Traditional knowledge and management capacities were accepted as strategies for reaching production improvements and natural resource management.

Both farmers and technical staff have

learned from these first experiments. They have come to a better understanding of such concepts as treatments, controls, variables and factors and farmers are now able to use them effectively. At the same time researchers have learned to adapt their scientific designs to farmers' realities and evaluation criteria. It is clear that farmers still have a lot to learn when it comes to recording and monitoring data. At the same time attention must be given to what are the most suitable statistical methods for analysing the results of farmer-managed experiments.

Experiments helped to develop LEISA

Farmer assessment of various experiments proved a positive move towards improving agricultural livelihoods. This was achieved either by reducing costs through the use of cheaper local inputs (eg herbal treatments for potato disease and shipita for the treatment of liver fluke) reducing dependence on external inputs or by introducing new elements into the production system (see p 67 pasture management). Follow-up experiments