

On-farm and Small-scale Storage and Extension

Convener — Margaret Annis

This workshop, convened with assistance from Associate Professor Rob Irwin, University of Canberra, was designed to introduce participants to two sociological methods of closing the gap between research and adoption of technology on-farm or in small-scale storage situations such as cooperatives. This is referred to by some as a 'soft systems' approach in which it is recognised that there are multidimensional and multifactorial components to any extension plan. Recent experience with extension has demonstrated the greater value of using grower groups to achieve adoption of technology/information rather than working with individuals. These methods are useful when a high rate of understanding and adoption needs accelerating. Information can be collected rapidly from involved individuals with a range of backgrounds. The input of the farmer has equal value with that of other stakeholders in the system.

A modified nominal group process was used to demonstrate, by participation, how issues of small-scale or on-farm storage could be approached in a small group of interested parties. The participants were each given a form containing three major grain storage topics, and asked to grade these in order of importance. The forms were collected and summarised by the organisers into issues of information, implementation, or intervention.

About 80 delegates were then randomly assigned, preferably so that they did not know one another, to 10 groups of 8 with a facilitator for each group.

They were asked to discuss common issues arising from their own identification of grain storage topics and, between them, draw a composite ecomap showing commonalities of issues, stakeholders and communication lines.

After a short break they were asked to fill in another form grading their three most preferred extension methods.

They were invited to individually work through a model of action planning to identify some positive extension interventions for their own particular problems.

The ecomaps were displayed and participants were requested to detect further commonalities and issues.

The ecomaps produced showed great diversity. A common problem was a difficulty with centring the map on the farmer or small-scale storer and working out from there. There was a tendency to centre on the map on some non-farm institution and sometimes it appeared that government was the recipient of research and technology.

Discussion about the processes and outcomes took place for the final half hour of the workshop. The main personal problem, identified by participants in using these processes, seemed to be that of becoming aware, mentally, that they were too close to the problem. They were asked to consider the idea that problems are negative events and usually expressed negatively.

For example, wet rice in a humid environment leads to the growth of moulds. People may die at an earlier age due to constant ingestion of mycotoxins but they won't hand over their rice for drying as it is their only possession. A possible solution is to transform the negative into the positive and move from being against something to being for something — 'to FLIP'. The result of this should be a goal statement which begins with the words: 'To promote an activity which is attractive to farmers but where they don't lose control of their rice. To promote a cooperative where in exchange for a small contribution of rice the use of a communal grain dryer is made available to dry all the grain. To approach an appropriate agency, such as WHO, to fund a grain

dryer.' Getting from the goal statement to the objectives involves people in further discussion through the nominal group process to matters such as:

- What are the possible target groups for the action plan?
- How will one be selected?
- What do community members want to happen?
- How will it happen?
- When?

Results of the mini-surveys

The two mini surveys produced an interesting view of aspects considered important in on-farm and small-scale storage. Insect problems were highly rated as important problems. There were nearly twice as many responses as for the next group of topics — residues, extension, economics, resistance, quality, drying, storage structures and management. In the case of preferred extension methods, on-farm demonstrations, small group meetings, media and field days were considered as almost of equal importance to participants.

Most important storage issues	% of responses	Preferred extension methods	% of responses
insects	18.6	on-farm demonstration	13.5
residues	9.7	small group meetings	12.8
extension	8.8	media	12.1
economic	8.8	field days	12.1
resistance	8.0	one to one (traditional)	10.6
quality	8.0	manuals/fact sheets	8.5
drying	7.1	commercial extension	7.1
structure	7.1	courses	5.7
management	7.1	farmer discussion	5.0
moulds	5.3	needs analysis	3.5
ecological considerations	5.3	early adopters	1.4
cooling	3.5	community action	1.4
loss of mass	2.7	video	1.4
		trainer training	1.4
		direct researcher to farmer	1.4
		endogenous motivation	0.7
		motivational competitions	0.7
		regulation	0.7

References

- Anon. 1993. DPI Systems Study Group, selected papers volume 1. Department of Primary Industries, GPO Box 46, Brisbane Queensland 4001, Australia.
- Katz, R. 1988. *Managing professionals in innovative organisations*. Cambridge, Massachusetts, USA, Ballinger Press.
- van der Heide, G. 1993. *Prepare and perform*. Faculty of Education, University of Canberra, P.O. Box 1, Belconnen ACT 2616, Australia.