

Predicting and shaping the future: managing information

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Summary. While extension services have generally been successful in providing technical information, they have largely failed to convince farmers to adopt the findings of research. Huge gaps remain in the flow of information between farmers and scientists, economists, market analysts, trade unions and urban society. At the same time, there has been an explosion of information that can only be extended effectively by well-informed and capable people who can filter out and deliver complex messages in an understandable way. Such a flow of information can no longer rely on the printed word, which is well beyond saturation level even now. Farmers may also feel alienated from the findings of research because they have not contributed to the generation of research ideas. The challenge for our future agriculture depends in no small measure on whether all those involved will be able to participate in the communication process, to obtain quality information and to act upon it.

Past and present

Extension services have been effective in delivering information on technical developments. However, I know from my own experience that my lot has failed as all-rounders and particularly in the delivery of good farm management business advice, in policy extension and in marketing; we did not have that kind of training. We were picked for our jobs on the basis of our supposed technical qualifications and that was it. We were certainly not chosen on our communication and people skills, nor on our approach to whole-farming systems, let alone on whether we had 'fire in our bellies' and potential as facilitators. Finally, we had insufficient insight and knowledge of the culture and sociology of farmers and so we started well behind in our missions.

Government extension services to farmers are now being cut in most parts of the western world. In some countries these services are no longer free or they won't be free in the near future. Morale is low where staff numbers have already been cut, or are now under threat. The latest review of NSW Agriculture and its functions is testimony to this. What's more, times are so tough on many Australian farms, because of world-wide recession, protected markets and drought, that traditional clients are anti-extension advice, certainly for long-term programs. After all, they have sharply reduced profits or no profits at all and with little improvement in sight.

In short, farmers see little incentive for change. Indeed some may feel that technical changes of the last thirty years, such as improved pastures and superphosphate, have delivered more problems than they are worth. Consider clover infertility, ryegrass and phalaris staggers, nutritional and management problems associated with increased stocking rate, let alone the extra costs!. Looking back, it may be remembered that pasture improvement provided the major thrust for change in southern Australia over the last thirty years.

Despite a substantial increase in the hardware for rural communications in Australia, there are still huge gulfs between policy makers and farmers, economists and farmers, traders and farmers, trade-unionists and farmers, and urban people and farmers. Just one recent example of note was the claim by some wool-growers of collusion between buyers when the market gyrated in October 1991. Such suspicion can be sustained by sections of the media that prosper by inflaming prejudice and encouraging ignorance either by misinforming or by failing to strive for and to achieve balanced reporting.

Shaping the future

Delivering information

There will be even more information in the future. The problem for farmers, scientists, extension workers and industry-support personnel will be to sort out what is useful and what is not. That has always been difficult, and it will be even more difficult in the future because of growth in the quantity of information. For scientists, the abstracting systems will be more valuable than ever. However for farmers and extension workers, the need for someone to do the sorting for them will increase. These 'sorters' will need to be well-informed and capable of filtering information effectively in the sense of delivering complex concepts in an easy-to understand format. To this end the skills of independent science-journalists, broadcasters and graphic designers will be more necessary than ever.

In the future, information will tend to be delivered visually and as the spoken word rather than by print. Operatives in the agricultural industry have neither the time nor the inclination to read any more than they do now. Indeed the mania for producing more and more printed material on the assumption that it will be read, needs to be curbed. As we develop smarter technologies such as ISDN, and we further deregulate the global telecommunications industry, the opportunities for people to talk with one and other cheaply and to see one and other, even though they are thousands of kilometres apart, will increase greatly. Informed commentators believe that during this year of 1992 Australia will achieve the most competitive telecommunications industry in the world. In short, the tyranny of distance will be broken down further and the need to communicate 'on the spot' - person to person - will be reduced. Companies and governments will no longer be able to afford the luxury of on-farm visits.

There will be an ongoing need to train and to re-train people in the use of the new technologies, such as the convergence of the computer, the television set and the telephone. While these technologies may be slower in reaching rural areas than in the capital cities, current experiments with telecottages by Telecom Australia could mean that access will be provided in the near future in major rural centres at least.

Farmers and their support industries will need the instant delivery of market-sensitive information by radio, facsimile, phone or computer to help them manage risk better. For example, Australian cotton growers are serviced daily by local and international traders about developments in world markets and their likely impact on domestic returns in the current season and the next. The Australian Meat and Livestock Corporation introduced four new market intelligence services, by facsimile, in November 1991, and it is likely that similar services will develop for the wool and grain industries. Technologies that allow farmers to dial data bases for timely information, on weather maps for example, will mean that farmers can get relevant information when they want it rather than having to wait for specified broadcasting times through radio and television services. However, information processors and deliverers will be judged by the marketplace on the accuracy, timeliness, relevance and the user-friendliness of their material, as well as its cost.

Self-help groups

In the future, more farmers will employ their own consultants and research workers through co-operatives, agribusiness companies and community groups. This is happening already in the dairy and cotton industries and will develop further in the wool and grain industries of the future. While group-extension fell from favour in the days of high farm incomes, its value has been rediscovered in recent years through the 900 Landcare groups that have been formed across Australia, and the Farmfacts groups in Victoria and New South Wales. The increase in the number of Farmfacts groups through the Farm Management 500 Program in late 1991 provides strong evidence of current support for the development of self-help groups. I would also predict that more farmers will be employed by government, on a part-time basis, to work within their own communities as agents of change.

Improving the adoption rate of research findings

The group-concept is certainly favoured by the Meat Research Corporation as its preferred method for seeing that research findings are disseminated and adopted. The method may well become a model for other research corporations who feel frustrated about the traditional filtering down processes that operate for the extension of information. It would be far better to have both researchers and farmers locked in and committed to a research and extension program before a research project starts rather than thinking

about the problem at its conclusion or years later! This view, and other insights into the failure of research findings to be adopted by the farming industry, were canvassed recently when I interviewed the present Chairman of the Meat Research Corporation and the material that follows summarises that meeting (Monteith, pers. comm.).

Rural Industry Research Funds (RIRF's) should be looking more into the reasons why farmers do not take up research findings. Farmers themselves state that they are super-saturated with information and that they do not see themselves as stakeholders in research and the new technology that is derived from it. Part of the reason is that they are *told* that 'this' is a good thing to do and that they *should* do it. They feel alienated from the research because they have not been involved in the generation of the ideas and their views have not been sought as to whether or not the findings would fit into their farming systems.

Australia has always had to cope with the tyranny of distance; but with current technology this should not pose a significant barrier to communication. However, it may be that our institutional structures have to be changed to allow for the effective packaging of research information which must have a comprehensive cross-disciplinary base, including short and long-term biophysical limitations, cost-effective management implementation, stated benefits and costs, product specification and market analysis. RIRF's could facilitate changes by trialling this approach on a pilot scale. The involvement of farmers would be sought from the planning stages so that they could experience a sense of ownership of the research and this would result in an improved adoption rate.

Extension services of the future may have two major roles. The first is to gather together technological data and supply information in a form that can be used for planning at the regional and the farm level. The second is to train facilitators who have a strong sociological orientation and who are technologically competent to co-ordinate farmer-generated ideas and to filter out the technological information that is available to implement those ideas. Through this process, the users themselves can shape change, pass judgement on its relevance to their farming systems and develop their sense of stakeholding in the research that they support.

I have one final point. Despite the advances in technology to deliver messages, despite the huge increases in the quantity of information, one huge problem remains. That is whether farmers and everyone else involved in the business of agriculture will actively seek quality information and act upon it.