NEW APPROACHES TO SUPPORTING AGRICULTURAL RESEARCH AND EXTENSION

AN INITIATIVE INVOLVING THE PRIVATE SECTOR IN MEAT AND LIVESTOCK RESEARCH

Nigel H. Monteith*

While the Meat Research Corporation (MRC) in Australia is not a fully privatized body it has developed a view of research and research funding that is essentially a private sector view. The particular features of its operations reflecting this view are guided by its mission statement which focuses on the funding of: "Consumer-driven research and development managed for a profitable industry."

Unlike the traditional groups, which disburse research grants according to the perceived merits of applications from the research community, the MRC is an investment bank, investing funds raised directly from the industry itself and the federal government. The MRC is accountable to its shareholders for the return on investments and hence has most of the control and decisionmaking elements in place normally associated with a venture capital group.

Structure and Operation of MRC

The Corporation was established to promote and fund research and development in the production, processing and marketing of cattle, sheep, goats, and buffalo. About two-thirds of the investments are made in the cattle industry, one-third in the sheep meat industry, and very little in the rest.

MRC was established in 1985 as a Corporation by an act of parliament. It has a board of eleven who are selected by shareholders, through industry representatives, on their skills in finance, business operations, marketing, or various industry operations. The Directors must conform with the Companies Act and comply with their obligations to benefit the Corporation as a whole. They do not represent any particular faction within industry and government, and a few are not even associated with the meat and livestock industry. All except two come from the private sector. The Corporation must hold an annual general meeting where the levy payers (both producers and processors) can dissolve the board, if they feel research is not yielding results relevant to their needs.

The staff of twenty-six handle a budget of US$34 million this year, rising to about US$40 million in the next year. The Corporation invests in a wide range of research and development, both on-farm and off-farm (table 1).

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* Nigel H. Monteith is Chairman, Meat Research Corporation of Australia.

Table 1. Areas of MRC Research and Development

On-Farm Research		*Off-Farm Research*	
Vaccines	Improving Production	Automated Processing	Human Nutrition
Sustainable Production	Stress	Meat Quality	Chemical Traceback
Pastures	Feed Conversion	Description	New Products
Weeds- Bio-Control	Genetic Improvement	Effluent Disposal	Market Knowledge
Embryo Technology	Bruising	Consumer Analysis	Tanning

Research and Development Investment Study

The MRC initiated a research and development investment study (RADIS) in order to establish investment priorities based on impact on the industry. The study initiated industry, consumer, and global environment studies using both brainstorming and investigative or analytical approaches to establish constraints and opportunities to the year 2010.

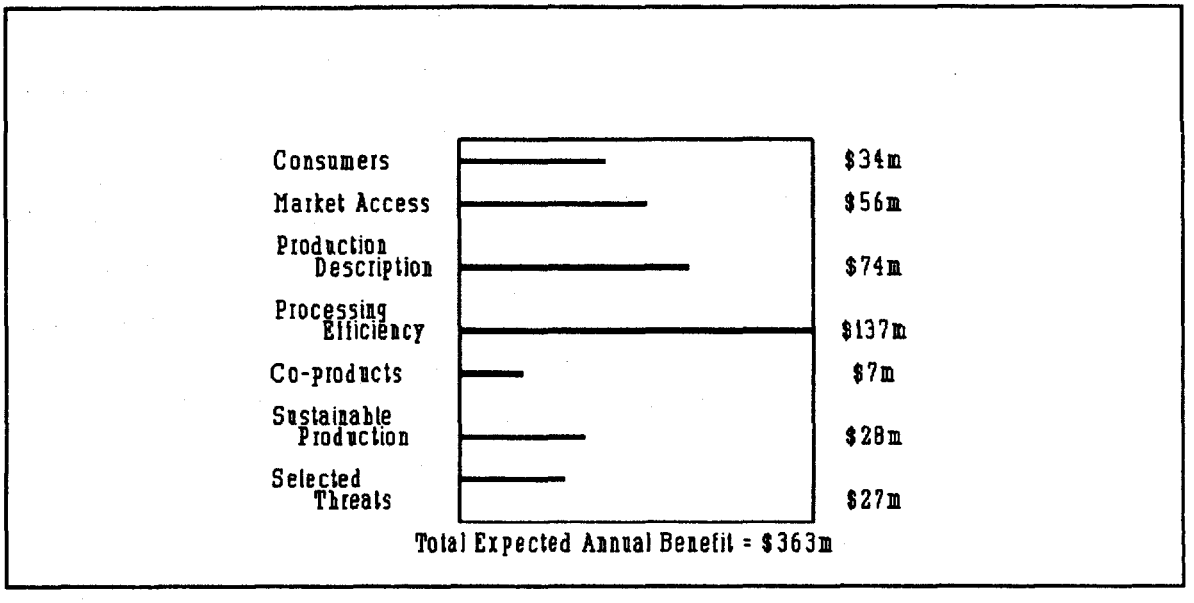
Priority investment areas were established with the help of a linked combination of national and global computer models. RADIS exposed a series of constraints and opportunities. By assuming certain incremental changes in parameters when constraints were overcome, RADIS calculated the annual benefit to the industry from a series of major topics after 5 years of research work. Funds to be invested were allocated by assuming rates of return are normally high for research and if rates of return could be kept constant over the range of topics, allocation would be in proportion to benefits. Calculation of costs at this stage is impractical.

The priority investment areas were incorporated into a 5-year plan. The priority areas were (a) consumer, products, and marketing; (b) market access and trade barriers; (c) product description and communication; (d) processing efficiency; (e) coproducts; (f) efficient and sustainable production; and (g) selected threats. Annual benefits from research into these areas are shown in figure 1. RADIS identified a number of key programs arising from the seven industry priorities based on three main thrusts--consumer needs, efficiency of the industry, and sustainability. MRC has adopted the project cycle utilizing RADIS as equivalent to a sector study followed by identification of key programs and rigorous preparation (with detailed project design, costing, benefits, and risk analysis) and independent appraisal.

Tendering

Implementation of research project components are subject to a tendering process. The Corporation has adopted a system in which components are subjected to competitive bidding and depending on the importance of leakage of research results to competitors bidding could be on an international scale. All investments are the subject of detailed contracts with research organizations, consultant groups, and processing companies. Each contract has specific and detailed terms of

Figure 1. Annual Benefits from Research



references, milestones for achievements, agreements on intellectual property, patents, and publications. Contractors are subject to random and separate technical and financial audits. MRC is in the process of setting up a continuous monitoring and evaluation system.

Technology Transfer

MRC places great importance on technology transfer, arguing that unless research results are relevant and readily available to the end user, investment in Research and Development is useless. At the same time, the Corporation has recognized that conventional technology transfer systems on-farm are not working efficiently and systems focused on off-farm research results are almost absent. The Corporation has initiated two main thrusts in technology transfer on-farm, both designed to involve the end user early in the research process to ensure the research is relevant and to ensure a sense of ownership by the end user.

MRC has funded and coordinated the formation of Technology Transfer Advisory Groups (TTAGs) consisting of three to four end users in each group. The groups confer with researchers and advise them and the MRC on the practicability and direction of the research to ensure results can be used readily and economically within the appropriate production systems. TTAGs also advise on the best way to transfer the technology.

The Corporation has initiated a pilot scheme forming farmer groups that are essentially self-help groups designed to generate and contract research relevant to their own priorities. The Corporation's consultants for this pilot program are using problem census and problem solving techniques similar to those used in a major Australian Aid project in Thailand.

MRC planners believe public services normally supplied by departments of agriculture will eventually be reshaped to become suppliers of information on request and trainers of group facilitators. Such organizations will play a purely support role. Supply companies and private

consultants are becoming much more prominent in technology transfer and can be used more effectively in technology transfer.

In the case of research results with the potential to be taken up by the commercial sector (primarily off-farm, processing equipment, new products, packaging, veterinary supplies) there is at least some market-driven incentive for some commercializers to work with researchers. However, the high risk and lack of knowledge, background, or feeling of ownership perceived by potential commercial users often means a dead end for many research results. Research is often looking for a market rather than the market looking for research.

To try to overcome this problem, MRC has developed several initiatives:

- The Corporation funds 50 percent of the cost of development of a new product. The move is designed to assist meat companies to work alongside researchers and establish their own R&D group.
- The Corporation established one company and has looked at investment in other companies with the potential to further new technology. In these cases, MRC would operate in a similar manner to the International Finance Corporation (IFC) by providing equity and loans to the company and withdrawing its interest as soon as the company is successful.
- The Corporation is presently negotiating with a venture capital group to set up an investment fund for commercialization of research results.

In all these cases, the MRC aims to inject "seed" money or risk capital to link the market place with research and to provide the means to ensure that research is relevant to the end user and used by the end user.

Conclusion

The major features of MRC operations, which distinguish it from traditional research funding, are based on a strict focus on research to provide what the consumer wants and research designed to ensure that the industry operates as efficiently as possible. This focus is lost if research planning and funding is left to researchers.