

# 'EXTENSION PERFORMANCE MANAGEMENT: INTERNATIONAL TRENDS FOR THE 1990s

Bob McKillop<sup>2</sup>

## ABSTRACT

*International experience from agricultural extension and related services is reviewed. The need for public sector reforms in Papua New Guinea is then assessed. The principles of public sector reform are applied to identify future directions for agricultural extension services. Since the task of improving the efficiency and effectiveness of delivering agricultural extension services is a world-wide priority, international experiences are also highlighted.*

**Key words:** *Agricultural extension, future directions, PNG reforms.*

## INTRODUCTION

Improving the efficiency and effectiveness of delivering agriculture and livestock services is a world-wide priority. I have been a field practitioner and analyst of agricultural extension in Papua New Guinea since 1962. To this experience, I have had the opportunity of reviewing the performance of extension services in Africa, South Asia, South-East Asia and the South Pacific since 1978. In recent years, in association with the Asian Development Bank, I have been bringing international experience of extension delivery together in order to identify key lessons which should be applied to the process of improving performance. These lessons from international experience provide a useful starting point from which we might address the issue "where to from here?"

This paper reviews international experience from agricultural extension and related services. The need for public sector reform in Papua New Guinea is then assessed. The principles of public sector reform are then applied to identify the future directions for agricultural extension services.

## LESSONS LEARNED

### International Experience

There is now a wide body of evaluation experience from rural development programs and projects around the world which provides valuable lessons on the role and effectiveness of service delivery systems. The proportion of successful projects has been lower in rural development (agriculture, livestock and fisheries) than other sectors, reflecting the complex range of human, environmental, technical, economic and institutional factors which need to be considered in designing interventions in this sector. The overall lesson from evaluation experience is that the macro-economic and policy environment must be supportive for growth in the agricultural sector. Where sound policies are in place, project success is determined by:

- the levels of **incentives** and opportunities built-in or generated by the project;
- suitability of the **production technology** and level of the productivity increases achieved;
- the effectiveness of the local organisations and the adequacy of the institutional framework they relate to.

Projects located in isolated or poor regions usually lack the essential components for success, especially an economic engine that could stimulate development. Although area development projects (such as the East Sepik RDP, Enga Rural Development and the Hiritano Highway Projects) may

<sup>1</sup> The discussion in this section is based on the author's forthcoming publication, *An International Handbook of Performance Evaluation*, which is being prepared in consultation with the Asian Development Bank.

<sup>2</sup> Shedden Agribusiness Pty Ltd, 2 Bay Street, South Melbourne, 3207, Australia.

have provided some local infrastructure, such as feeder roads, these generated only limited benefits because of lack of a marketable surplus.

Internationally, large investments have been made in agricultural services projects to increase agricultural production through the strengthening of services to farmers which develop:

- . improved technology (research);
- . provide advice on its use (extension);
- . ensure the regular and timely supply of the inputs called for by the new technology.

As the supply of inputs can reliably be left to private traders and merchants, the majority of agricultural service projects have focused on improvements in research and extension delivery. International assistance has played a key role in augmenting the flow of resources to research activities and in promoting the World Bank's training and visit system (T&V) of agricultural extension. While projects have assisted in building part of the institutional infrastructure necessary for supporting a science-based agriculture, sustainable institutional strengthening has proved difficult.

The principal **internal factors** which generally result in reduced economic and financial performance of agricultural services projects include:

- . over-reliance on public sector agencies, which may stifle private sector initiatives;
- . an institutional culture orientated toward administration and allocation, rather than the effective management of resources to achieve performance targets or professional research ethics (the institutional culture);
- . the budgetary and procurement procedures, salary scales and staff policies of public sector organisations, which stifle incentive and achievement;
- . inadequate pricing of services to generate signals on which activities are saleable and to generate income to meet increased operating costs.

The **external factors** which can adversely affect the performance of agricultural services projects

include:

- . depressed **commodity prices** which suppress returns to agriculture;
- . **exchange rate policies** which discriminate against agriculture;
- . **government intervention** to influence the price of farm inputs (which generates artificial demand).

**Institutional Culture:** the rationale for agricultural research and extension services assumes an institutional culture supportive of innovation and scientific inquiry. In most developing countries, service delivery agencies are characterised by a bureaucratic culture which is the direct antithesis of an innovative and entrepreneurial approach. Agencies are dominated by rigid hierarchical power structures: innovation and challenges to traditional approaches are actively discouraged. Service delivery agencies are also characterised by limited planning and budgeting capability, poor management and accounting systems, inadequate funds, especially for recurrent operations, and reward systems which stifle incentive.

**Technical Issues:** The effective demonstration of improved technology which generates benefits for target beneficiaries is the critical factor for success in agricultural research and extension projects. This requires that the technology development and dissemination process produces innovations which generate financially attractive benefits to farmers within their context of resource constraints and socio-cultural values. It implies that research involves farmers in design and implementation of trials from a farming systems perspective and that extension has proven methods for demonstrating benefits within the context of target farmers' frame of reference.

The technology for developing and disseminating information (messages) needs to be appropriate in terms of the local resource base. Cost-effectiveness in reaching target groups and maintenance capability are the key criteria.

**Financial Performance:** Generally service organisations are characterised by low rates of efficiency and financial performance compared with private sector operations. They must

Table 1: PERFORMANCE INDICATORS, AGRICULTURAL SERVICES

SECTOR	PERFORMANCE INDICATORS	UNITS	Standard
<b>Agricultural Services</b>	<b>Capacity:</b> Numbers and qualification of staff Presence of active private sector and non-government organisations Agency planning and budgeting capability Management and accounting systems System of staff reward and incentives	Nos x qualif'n Nos/role NGOs-private organis. qualitative assess. qualitative assess. qualitative assess.	
	<b>Output:</b> Area of response to new innovations (rate of adoption) "Willingness to pay" for information or service Performance of technical assistance inputs for institution building Relevance of the skills provided by training to the work tasks of staff Number of trained staff who continue to work in their target role	% adopters %/level of willingness qualitative assess. qualitative assess. percentage	>35 percent
>70 percent	<b>Efficiency:</b> Financial viability of service agency Organisation structure (top heaviness) Operating efficiency Operating cost per farmer contact day	Ratio of salaries/wages to total budget Ratio of field staff to management/service staff Ratio of field staff salaries to total budget \$/ contact day	<65 percent
	<b>Impact:</b> Financial returns to technology promoted under farm conditions Farmer participation in design and implementation of trials Cost-effectiveness of technology for developing and disseminating information ("messages")	FIRR qualitative assess. \$/000 adopters	

generate significant gains in productivity and recover their costs of operation (improved financial performance) if the services are to be provided on a sustainable basis. This may require reform of civil service staffing and wages - covering reductions in number of agency employees and improved pay structures - and identification of activities which can be privatised, delegated to the local community or stopped altogether. Extension agency involvement in the operation of nurseries, input (eg, fertiliser and seeds) delivery and similar functions not only involves the inefficient use of resources, but also diverts staff away from the extension function and inhibits private sector operations where these outputs are provided at subsidised

rates. Agency achievements against financial performance criteria, such as the ratio of salaries/wages to total budget, ratio of field staff to management and service staff (top heaviness), ratio of field staff salaries to total budget (operating efficiency) and operating cost per farmer contact day, provide useful indicators of the financial viability of the institution. Table 1 provides a summary of some of the key performance indicators for agricultural service delivery agencies.

**Economic Viability.** Inefficient resource allocation to agricultural services has persisted, in part, due to the use of classical economic approach to estimating the EIRR of research

and extension projects. This constructs economic models which identify an area of response to an innovation and compute a supply response, taking into account factors such as lags in adoption. The approach poses difficulty in identifying benefits attributable to the project (the problems of identifying "with" and "without" cases) and in obtaining accurate data on adoption response.

An alternative approach is emerging from contingent valuation methodology. This is based on farm level research to identify responses to research/extension messages and identify the "willingness to pay" for the information or service. Identification of the market value of a service is central to the generation of a performance orientation in the management of the service agencies.

**Service Structure:** Typically, agricultural service delivery has involved great attention to institutional structures. Experience suggests that institutional capacity is more important than structure. Nevertheless, the modality of service delivery is also a significant factor affecting performance. On the whole, integrated industry-based services have performed better than generalist extension services which lack a clear focus for their activities. Efficiencies can be generated through agro-industry structures (e.g., dairy cooperatives, nucleus plantations/processing factories, intensive livestock and horticulture industries) which are able to provide integrated packages of technology, inputs and services on a commercial basis. Here the balance between service charges and the financial viability of outgrowers/producers is critical to the financial viability of the project and long-term sustainability. Where the market no longer requires the service, it cannot be continued without external support. The comparative advantage of the industry and the conducive sectoral environment including favourable markets and prices are key factors contributing to success.

However, a controlled, industrial production mode restricts the independence of the individual producer. Where smallholders are involved in supply of raw materials to central processing plants, significant communication difficulties can arise from differences between the institutional culture of the processor and the cultural norms of smallholder producers. In the absence of decision-making and

arbitration mechanisms which retain the mutual respect of both sides, irreconcilable disputes can quickly arise which can, in turn, lead to complete project failure. For the bulk of smallholder farmers, there is an ongoing role for the traditional generalist extension service.

### Papua New Guinea Experience

Development project experience in PNG suggests that too often, activities have been imposed from above with inadequate consultation with and commitment from target communities (Grittenden and Lea 1989). A lesson learned has been the importance of community participation in the design process. However, the process of consultation is difficult to implement in an effective manner. Government departments have a top-down communication structure and have difficulty making effective linkages at the community level, while officials and community leaders alike reinforce expectations that projects will provide tangible handouts to rural communities. As a result, there must be increased emphasis on a community development approach which encourages communities to take more responsibility for their own development (e.g., through the Village Services Program). The aim is to identify communities and individual entrepreneurs who are prepared to take more responsibility for their own development and assist these groups to mobilise their own resources.

The experience of bottom-up planning of programs and projects has been that rural communities tend to express their priorities in terms of improved social services (education and health services) and infrastructure provisions (roads and market access), rather than economic development. This is a desire for improved living standards without establishing the economic base to sustain the social services, infrastructure and consumption patterns. Effective development requires the planning process to match community desires with feasible and sustainable activities.

The effectiveness of support services and infrastructure influences the response of small-business operations to economic opportunities. Local groups complain they receive inadequate financial advice and skills training from Government extension services<sup>3</sup>. There is also a constant demand for enhanced access to credit. In reality, evaluation experience suggests that over liberal credit provision by financial institutions burden businesses with debts they are unable to service<sup>4</sup>. Moreover,

the lack of commercial experience within civil service agencies means that extension advice is often of limited value.

## GOVERNMENT IN THE 1990s

**International Trends:** Papua New Guinea is being integrated into the global economy. This means that PNG is under pressure for its economy to become more competitive, while ensuring that its natural resources are managed wisely for the benefit of future generations.

**Traditional agricultural service delivery agencies** were based on the institutional culture of the industrial era. These procedures, rules and regulations treated cases in a detached manner, thereby ensuring an even-handed and equitable response to individual clients. These mechanisms were also used to control what went on inside government so that resources were not misappropriated for improper use. Over time, regulation of the process (or controlling inputs) became to be the dominant feature of government.

**Modern knowledge-based economies** demand institutions which are flexible and adaptable. Public perceptions of government now characterise the slowness, inefficiency and impersonal nature of the bureaucracy in responding to community needs. In PNG, the government has experienced difficulty in delivering basic services in rural areas. The outcome is a dramatic fall in public confidence in the government.

The challenge of the 1990s is to revitalise government to be responsive to community needs and accountable for the efficient management of public resources. Transparency and the measurement of results, or outcomes, is central to this process. The demand is for entrepreneurial government agencies which:

- measure performance in terms of outcomes, rather than focussing on inputs
- are driven by their goals, not by rules and regulations; empower citizens, pushing control out of the bureaucracy into the community;

- are customer-driven, meeting the needs of the client, not the bureaucracy;

- promote competition between service providers, rather than controlling the delivery of services themselves;

- are anticipatory, preventing problems before they occur, rather than simple offering service afterward;

- use market mechanisms rather than administrative allocations;

And catalyse all sectors - public, private and voluntary - into action to solve their community's problems.

These principles set the framework for public sector reform in PNG to improve the performance of agencies involved in the delivery of agricultural services. These agencies need to respond to new development challenges, including indiscriminate exploitation of natural resources, inappropriate land management practices and policies, reduced forest areas and marginalised agricultural land.

## FUTURE DIRECTIONS FOR PNG

### Service Delivery Options

These principles of public sector reform establish the parameters for the future directions for agricultural extension services in Papua New Guinea. Future extension services need to devolve power from central bureaucracies to local and regional bodies, with entrepreneurial government agencies which are responsive to their customers, performance driven, market-orientated and anticipatory of forthcoming problems. The task is primarily one of achieving fundamental changes in the institutional culture within extension agencies in order to achieve desired performance outcomes.

Structural changes are of less importance. However, PNG is a diverse and unpredictable nation which does not lend itself to standard solutions. Therefore, several themes for service delivery

<sup>3</sup> Initial findings of the AIDAB/PNG Renewable Resources Sector Study indicate widespread frustration among producers over claimed shortcomings of extension services and recognition of the need for access to technical information and improved management skills for both improved production and sustainable business.

<sup>4</sup> Although there are regular political demands for easier access to credit, the real constraint is the capacity to identify viable projects and manage them well. The East Sepik study and other surveys of credit requirements have identified the over liberal provision of credit by financial institutions as a significant constraint as ventures are burdened with debt levels beyond their capacity to service the loans.

systems are likely to emerge con-currently. These include:

**a) Industry-based service delivery agencies:**

The emphasis here will be on efficient corporate bodies which are focuses, controlled by the industry and are financially autonomous through levies or direct charging for services. In the case of Ramu Sugar and Niugini Tablebirds, the central processing agency delivers a total package of inputs and technical advice and deducts the cost from the commodity payment due to the client. Such models are financially efficient and sustainable so long as the industry retains a comparative advantage, but are vulnerable to commodity price fluctuations and the volatility of outgrowers in response to central control. The industry extension model, developed initially by the Coffee Industry Corporation, offers the opportunity to develop a performance-orientated institutional culture. To the extent that this is achievable in PNG, this approach is much more focused and cost-effective than the generalist model.

**b) Private sector delivery:** That the private sector can provide input supply and marketing services much more efficiently than government agencies is not in dispute. Public sector involvement in the provision of these services, often at subsidised rates, generates market distortions which inhibit the development of a vibrant private sector (McKillop Williamson & Associates 1982). For extension services, the international trend has been one of increasing involvement by professional consultants in the provision of technical, financial and managerial advice on a fee for service basis. The author's 1982 report contained a proposal to transfer the agricultural extension function to the private sector on a fee-for-service basis (Tovue 1982). Subsequently, management agencies became active in service for delivery to agricultural enterprises promoted by the Agriculture Bank and a fledgling professional cadre of agricultural consultants has emerged. Efficient agricultural enterprises in PNG depend on sound professional advice which, in turn, suggests a need to strengthen the professional standards of consultants.

**c) The voluntary sector:** Given the high cost of professional services, there has been an international trend to use non-government organisations (NGOs) to deliver low cost ser-

vices to rural communities. NGOs have been active in so-called landowner awareness programs in PNG. However, such programs have suffered from an inadequate technical and economic base, often resulting in messages which are false, impractical and/or confusing to rural communities. NGOs have a useful function where they can build on and extend sound technical advice to rural communities in a cost-effective manner, but are unlikely to provide magical solutions to the service delivery problem.

**d) Government administrative services:** Despite widespread disillusionment over performance, government agencies continue to provide the main vehicle of contact between the state and its rural constituents. Several approaches have been tried under various aid-funded projects, but the trend has been towards a district management team under a unified chain of command to provincial headquarters. The staff of these district teams represent the major public sector resource in PNG for linking rural communities with central services. The issue at hand is not the restructuring of these teams in some new form, but the development of a stronger performance-orientation which ensures that the resources invested achieve effective outcomes. A major weakness of the district teams is their lack of a sound technical/economic base and proven messages to extend. Therefore, the institutional reform process needs to address the strengthening of capacity in this area.

### Target Groups

In the past, agricultural extension has focused on individual farmers or farm households. Experience suggests that this approach is financially inefficient and ineffective in the PNG context. Sustainable development depends on the capacity of local institutions at the household, area and industry level to manage the new and expanding activities upon which economic growth depends. Typically, local economies in PNG are characterised by smallholder agriculture, with several large producer organisations providing marketing, processing and input supply services to thousands of village farming or fishing families. Increasingly, resource-owner groups are seeking to establish their own institutions which can enhance their role in resource management activities. Such institutions should increasingly take up responsibility for

servicing the needs of their individual members. The incentives for expanded production depend, to a large extent, on the efficiency of these service organisations and associated commercial operations such as banking and retailing.

These fledgling institutions have faced difficulty in obtaining access to the necessary information, skills and technology to operate on a sustainable basis. The target group for research and extension services therefore needs to become these institutions - including NGOs - rather than individual families.

### Extension Messages

Extension services in the 1990s must be market-driven. They need to identify incentives which are attractive to their clients and provide practical advice on the necessary steps to generate these benefits. This requires a fundamental reorientation of the institutional culture within research and extension agencies. They need to measure performance in terms of outcomes, not inputs, and to understand market mechanisms rather than administrative allocations. The former public service approach, with its emphasis on encouraging dependency through hand-outs, is no longer sustainable. This generates a need for more in-depth professional training in agricultural systems and economics on the part of both researchers and extension personnel.

### REFERENCES

- Crittenden, R. and Lea, D. 1989. Integrated rural Development Programmes in Papua New Guinea: external aid and provincial planning, IASER Monograph No. 28, p 115.
- McKillop Williamson & Associates, 1982. DPI Manpower and Training Review, pp. 102-105.
- Tovue, JC. 1982. How can Agricultural Production be Increased in East New Britain. Appendix D. In DPI Manpower and Training Review. February 1982.