

TOWARDS AN APPROPRIATE SYSTEM OF AGRICULTURAL  
EXTENSION FOR SAMOA

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**ABSTRACT**

This paper examines the perceptions of policy-makers and farmers and their experiences with agricultural extension services in Samoa. A survey interview of policy-makers and a case-study of a village community, were used to collect data. The results suggest that rural communities require policy-makers to consider all factors that influence technology adoption if the extension service is to be socially, economically, ecologically and financially sustainable. They also suggest that the MAF could be the major extension service provider but partnerships with alternative extension providers should be explored for Samoa. This is consistent with the government policy of promoting a leading role for the private sector in

economic development, while using its own limited budgetary resources more efficiently.

**KEY WORDS:** *BUDGETARY RESOURCES, SUSTAINABILITY, PRIVATISATION, EFFICIENCY*

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## INTRODUCTION AND OBJECTIVES

The role of State funded extension in socio-economic development has been increasingly challenged in recent years due to the high cost of providing such services. Many countries have significantly restructured or even privatised their agricultural extension services. The cost of maintaining these systems has put governments in a difficult financial situation. It has been said that publicly funded extension systems are too expensive and are not financially sustainable. They contribute heavily to national budget deficits and foreign debts in some countries (Ameur, 1994; Umali-Deininger and Schwartz, 1994).

In the early 1960s, the extension service of the Ministry of Agriculture and Fisheries (MAF) extension service in Samoa was decentralised. District extension stations were provided with improved transportation systems and better trained staff. This was consistent with the State's emphasis on improving the service to farmers to achieve agricultural development, national food security and social well-being. Agricultural extension service delivery was achieved through individual visits, group methods and the mass media. The State borrowed from abroad to strengthen the MAF's extension function and increased the Extension Division's budget to sustain operating expenditures. High recurrent costs made this approach to extension too expensive (Axinn, 1988). A lack of access by

farmers to support services namely credit, farm inputs and rural infrastructure also contributed to failure (Ameur, 1994).

In the 1970s, State-owned enterprises, lending institutions, input suppliers and pricing stabilisation schemes were developed to channel State subsidies to farmers. Rural development projects were introduced in association with other State agencies and NGOs. They were fully subsidised through credit schemes, free State services and subsidies on farm inputs. Most were successful in terms of increased farm production, higher incomes and better social welfare but had limited financial sustainability due to lack of market opportunities, poor co-ordination and communication and lack of accountability, leading to corruption. Farmer associations were established but were short-lived due to distrust and financial mismanagement: many were designed and controlled by bureaucrats and donor agencies.

In the early 1980s, small extension projects were developed within the MAF, which resulted in additional resources and increased budgetary allocations. However, the linkage among research, extension and farmers was inadequate. Extension officers (EOs) were poorly trained, inexperienced and overworked and methods used were ineffective. These small project-driven extension services were financially unsustainable beyond the project life. For example, the extension service

established for growers under the AIDAB Cocoa Project in 1985 was abolished due to duplication of services (Lubett, 1997). In 1984, the training and visit (T&V) system was introduced to improve staff supervision and logistical support, and narrow the extension focus to concentrate upon technology transfer. National research and district extension stations were upgraded and new vehicles were purchased, which led to higher recurrent costs. Technology transfer was channelled through contact (progressive) farmers but technology was not shared with their counterparts engaged in subsistence farming. In mid-1988, the T&V system was temporarily suspended due to financial constraints: the State's budget was spent on staff salaries rather than on recurrent costs. This impacted upon staff mobility and supervision. The system imposed a heavy financial burden upon the State and taxpayers and was unlikely to increase agricultural production unless effective research, incentives, inputs and infrastructure were available (Lubett, 1997).

In the early 1990s, MAF's operating expenditure fell significantly due to the negative impact of devastating hurricanes and new economic policies. As part of its macroeconomic restructuring programme, the State launched its statement of economic strategy (SES) and new output performance budget system to: improve efficiency, allow free market competition, rationalise the public sector with clearly defined career paths,



strengthen middle management and maximise the private sector's role. This led to removal of casual labourers and most work was done by rural communities and the private sector on a contractual basis. Budget estimates and performance reports of State ministries focused on planned outputs rather than on inputs which resulted in more efficient use of limited budgetary resources. The fragmented nature of MAF's extension service contributed to higher recurrent costs and the duplication of services. Its organisational structure was described as weak and the delivery of service to farmers as unreliable due to poor planning, communication and co-ordination (World Bank, 1991).

Agricultural extension systems initiated by donor agencies have put developing countries in a financial crisis (Ameur, 1994; Farrington, 1994). The Samoan government has learned lessons from its past experiences with a fully funded extension service and the possibility exists for exploring privatisation (ADB, 1995). However, there are concerns that a private extension service would not benefit the whole community, especially subsistence farmers, and this could lead to social unrest. Privatisation of the extension function in New Zealand created an opportunity for private consultancy services to employ the redundant staff (Milligan, 1996). However, privatisation of the extension service in the Netherlands caused social problems (Schwartz, 1994). Local policy-makers

have argued that MAF's extension service and the private consultancy service practised in New Zealand are incompatible with Samoa. Only commercial farmers in Samoa may be able to afford private consultancy services, as the majority of Samoan small-holder farmers are reliant on State assistance.

The purpose of this study was to investigate perceptions of and propose alternative strategies for agricultural extension through consultations with policy-makers and farmers.

### **MATERIALS, METHODS AND DATA SOURCES**

The main research methodologies used in this study included survey/interview, case study and desk research. The semi-structured survey/interview incorporating both qualitative and quantitative questions was developed and used to interview policy-makers to determine their perceptions on the possible options for the extension service and to see if they were consistent with State policies. The case-study approach using rural research and participatory research appraisal (RRA/PRA) techniques to increase community participation, was adopted for the village case-study to determine farmers' needs, the factors influencing technology adoption and the reasons for the limited impact of MAF's extension programmes on rural socio-economic development. Secondary data (documents, references, reports) were also collected and analysed.

### ***Interviews with officials***

Phone interviews with appropriate officials were conducted in Apia town using a checklist. Interviews with Treasury officials focused on the proportion of State budget allocated to the MAF and Extension Division and their perceptions of a new budget system. Public Service Commission (PSC) officials were asked about the conditions and the real impact of a public sector reform process on the agricultural sector. Agriculture Store Corporation (ASC) and private sector officials were interviewed to discuss their concerns about the proposed privatisation of ASC's monopoly operation prior to the elimination of subsidies. Development Bank of Samoa (DBS) officials were questioned about current lending policies for agriculture and fishery. Officials were also asked to identify their activities in relation to meeting women's needs and promoting community development. These preliminary investigations provided additional information on suitable protocols and research techniques for the case-study.

### ***Village case study***

Samoaan farmers are not a uniform population; they belong to households, women's committees, youth clubs and other informal groups. They are not all involved in extension programmes and have different educational backgrounds and skills, training in agriculture, farm business enterprises, work experiences, extension approaches,



institutional links and clienteles. Siufaga village, located in the eastern coast of Savaii Island, was involved in different MAF extension activities and price support schemes (bonus schemes) over the years. Five households were selected. Two household heads were farmer group members, one household head was a small farmer, one was a former group member and one was a women committee's president. Of the five households interviewed, three were headed by males and two were headed by females.

A pilot study was undertaken on a one-day trip with the EOs to Siufaga village to contextualise the issues. Key informants (pastors, school teachers, women and youth) were identified and rapport and trust developed. Full community participation (with the EOs' help) was encouraged to assess extension approaches and programmes for village development and cultural acceptability of State rural development programmes. The checklist was reviewed and redefined based upon the responses.

During a second visit to the village for a 'kava ceremony', the villagers were informed about the study purpose and were asked to give consent for the case study. Smaller meetings, discussions and interviews with interested groups of 6–8 persons (women committees, farmer groups, youth clubs and children) were conducted, followed by a debriefing session. The household interviews were conducted in the evening to ensure full participation. Interviews were 2–3 hours long and

were designed to determine the impact of MAF's extension programmes on household income, food security and standards of living. Direct/participant observations and interactions with village CBOs – including group discussions – were conducted in the presence of the EO. Interviews were tape-recorded and notes were taken.

### **Data analysis**

Two phases of data analysis were undertaken. The first phase was the transcription of records of interviews and the written notes to identify emerging themes and to formulate hypotheses. Responses were then segmented into issue groups and colour coded, then later tested for confirmation or rejection. The second phase was intensive data analysis.

## **RESULTS AND DISCUSSION**

The results are presented in two main sections featuring the perceptions of (i) policy-makers and (ii) villagers who participated in the case study on Siufaga village.

### **Perceptions of policy-makers**

#### ***Inefficient public extension system***

Treasury and PSC officials indicated that people are poorly motivated and work performance is low in government ministries. MAF officials felt that the extension service is often controlled by personal agendas which result in a multitude of

unnecessary services. Several officials complained that the quality of the EOs' work was poor, there was little understanding of research results and often the wrong message was delivered to farmers. Commercial producers argued that MAF's extension service is non-existent and they would benefit from working with exporters. The general view was that the extension system should be restructured. Treasury and PSC officials reported that a new output performance budget system would improve the efficiency of MAF's extension function in terms of accountability and ensure the efficient utilisation of State resources. However, there was concern that a new budget system might reduce efficiency, if there were budget cuts and staff redundancies. In response, the government's decision was to utilise its limited financial resources more efficiently.

### ***Alternative systems of agricultural extension***

MAF officials were concerned that the private sector would not be able to provide improved service, encourage farmer participation and enhance agricultural production as the costs for service delivery may be unprofitable. ASC officials argued that both research and extension needed to be strengthened. The latter could be effective but would depend on the resources available. 'If research improves, extension is effective. It shouldn't be privatised, that's one of the services that the State should provide.' However, the EOs



argued that if the State opts to continue the present system, more resources (staff, vehicles, living allowances) must be made available. It was suggested that MAF should concentrate on research, while allowing private firms to provide their own services. To resolve women's complaints of no contacts with male EOs, more female EOs should be recruited to help improve the business skills of women.

#### **Promotion of private extension**

Treasury officials believed that new economic policies would create unique opportunities for private companies to provide extension services and relieve the financial pressure on the State. Private sector members fully supported the initiative but needed more consultations as they were of the view that they would need State funding. There were concerns that not all farmers could pay or would benefit from services provided by the private sector. Private sector officials criticised the ASC for competing unfairly with them on both input and output markets. Some expressed views such as 'It should be closed to allow fair competition' and 'If there are only few companies, it would be worse.' MAF officials contended that there is undoubtedly a role for private firms, NGOs and farmer organisations to provide extension services for sustainable economic growth but there is still room for the public sector. They felt that the ASC was the only

avenue to channel State assistance to farmers as most farmers are poor.

#### **Development of commercial agriculture**

Officials were confident that a new economic policy would promote the concept of agricultural commercialisation to resolve socio-economic issues, where farmers can be trained in areas of agricultural marketing, agribusiness and entrepreneurship. Private firms would deal with commercial farmers while the State would work with small farmers. MAF officials argued that the private sector would never take any risk of losing money at village level due to fragmented land ownership. Private sector members suggested that resource distribution between the two sectors must be balanced based on the difference in scale of operations. 'Commercial sector caters for export markets and traditional sector for domestic markets'. Concerns were raised that Samoa is a small country, with scarce natural resources and that commercial agriculture would motivate people to clear the forests resulting in soil erosion, water pollution and higher demand for costly inputs.

#### **Perceptions of village community**

Siufaga village is located on the east coast of Savaii Island. In the 1991 census, the total population was 786, but this had decreased due to urban migration and emigration. Several facilities (schools, churches, etc.) and services are present. Religion is important

in village life; there are three churches and each has its own youth club. It consists of various CBOs (village *fono* [political meeting], young men, women's committees, youth clubs and other informal groups). A village *fono* is held monthly to discuss its policies and development issues – agriculture, access road maintenance, water supply, etc. The women's committee has 30 members, responsible for family health and village/church care. In 1984, Siufaga was involved in the T&V system but it was temporarily abolished due to financial constraints and limited impact on people's lives. In 1993, it was selected as a pilot area to promote the farming system development (FSD) approach for the AusAID farming system, food security project (FSP).

Farmers have adopted the concept of agricultural commercialisation and crop diversification technology through informal training. Comments included: 'Unasa is sent abroad to observe the taro leaf blight (TLB) control. Others attended the informal trainings done by MAF although many ended schooling at village/district level.' During the meeting with two existing farmer groups, leaders were asked to give an account of events in agricultural development since the TLB outbreak in mid-1993. One leader stated that farmers had learned a lot from MAF especially about control of TLB.

#### **Agricultural diversification**

Before involvement in the FSP, 75% of household



incomes came from agriculture and fishing and 25% came from salaries. Taro (*Colocasia esculenta*) was the main source of non-remittance cash but diseases e.g. TLB had an adverse impact on villagers' social status. There has been a trend to re-establish commercial taro production. Farmers have diversified their crop production systems. The length of time that land was left fallow has decreased dramatically. Before the TLB, taro was grown on 2–4 acres of land and the fallow period was more than 6 months, in comparison to less than 3 months after the intervention. Perennial crops are intercropped with short-term crops in small areas that conserve the forests and leave enough land available for other developments. More than 10 crops, including vegetables and pandanus palms, are planted by women. Twelve varieties of cassava were being grown by two farmers as a taro substitute. There has been a high demand for taro and kava (*Piper methysticum*) planting materials. Land shortage was identified as an issue during the PRA but this has been somewhat overcome with clearing of old coconut trees.

### **Increased livestock production**

The number of cattle and domestic animals (i.e. pigs, chickens) raised for consumption and sale has increased. In 1993, a minority of people raised cattle, while most concentrated on pigs and chicken for social events and local consumption. Now, 43 of 73 village households raise cattle and

progressive farmers have expanded and manage their own cattle farms.

### **Community development**

Siufaga was severely affected by cyclones with damage to roads, housing, electricity and water supplies. Since the PRA exercise in 1993, the quality of village life has improved. About 70% of houses have been upgraded using farm income, and the village has become attractive to tourists. Incomes have improved and villagers reported the following: 'Unasa earns an annual farm income (\$3,845) from crop sale and non-farm income (\$600) from remittances/road maintenance. Vesi's annual farm income is derived from crop sale / non-farm income (\$500) from wages. Ivoga earns an annual farm income (\$600) from vegetables/ non-farm income (\$60) from road maintenance.' There has also been an increase in the number of vehicles (11 second-hand pick-up trucks, five owned by farmer group members as opposed to one vehicle previously). Most children attend the primary and high schools and people can afford to pay for medical expenses.

### **Revival of cultural and religious values**

Introduction of the FSD approach has educated the villagers to preserve their indigenous forests and cultural trees (i.e. coconut and pandanus). Such trees are valuable resources which have tangible and intangible benefits for individual

farmers and society. They have multiple uses e.g. for food security, firewood, fishing, housing, handicrafts, weaving and for ceremonial occasions. Trees have medicinal values which save rural lives and are used for land boundaries to avoid land disputes. Coconut husks/shells are used for cooking as a substitute for costly kerosene.

The tourism industry benefits in terms of landscape and scenery as trees are planted along the coast. Women have benefited from tourism through sales of homemade handicrafts.

### **Women and agricultural activities**

Before the FSP, women concentrated on household activities (weaving/fishing) as their major income sources. They have become full-time farmers and spent on average half of the time men spent on gardening. Some comments included: 'Ivoga used to sell fish/fine-mats before the TLB but now spends 4 hours/day on her garden with her spouse.' Her vegetable garden has generated an income of \$40/week for family food. More job opportunities are available for women and children. Those without young children tended to work full-time on farms while their husbands engaged in off-farm employment. Men's roles were being performed by women. 'Husband works in the office while wife manages farm/prepare food.' Women derived more income from growing vegetables and other crops.



## **Factors influencing the adoption of innovation**

### **(i) Land shortage and ownership**

Customary land is a controversial issue as everybody has the right to land, particularly the village *fono*. Land ownership has discouraged progressive farmers from adopting agricultural commercialisation and crop diversification technologies. 'We want to have cattle farms but cannot lease any lands or get more small land holdings as they are scattered.' It is a time-consuming process and it is difficult to seek the consensus of a large extended family.

Land shortages encouraged the purchase of farm inputs to increase land productivity to overcome soil infertility. Farm inputs from ASC were unaffordable for many farmers. They were asked what would happen if the State closed it and allowed other companies to sell inputs. The response was that farm inputs would be unaffordable. Veve said: 'we can't afford fertiliser (\$22/kg), it's bad to close it.' Money is usually saved for school fees, *fa'alavelave* (traditional gift giving) and church donations but not for farm inputs, as demonstrated by 70% of households growing taro for consumption. Small farmers can afford to purchase bush knives to grow crops for family use but progressive farmers need more farm inputs to run their commercial farms.

### **(ii) Market availability and characteristics**

Agricultural commercialisation and adoption of

crop diversification technology has been restricted due to limited market opportunities for short-term crops such as ginger, peanut and chillies. Farmers criticised the MAF and State officials for failing to look for new markets. 'Crops earn more profits but now, there's no market, just grow them for stomach. If there's a fixed market, more interest in them.' There is a high demand for short-term crops as they match the demands of daily expenses, church, etc. Returns from longer term crops are heavily discounted. Progressive farmers have the financial capabilities to diversify to other farm enterprises. They can operate the cattle farms funded by farmer group loans in response to relatively high market prices for beef.

### **(iii) Community participation**

MAF's extension service was regarded by villagers as a fundamental tool for communication with State officials. Complaints were mounted about no contact with the EO, which resulted in short-lived farmer groups and the questionable efficiency of extension programmes. Five farmer groups were established in 1993 by the PRA team, two of which still existed, but had decreased in size from 20 to 10 members. Three farmer groups collapsed due to infrequent visits from EOs after the bonus scheme/no free gifts (planting materials/inputs from the FSP). Village CBOs showed no indication of participating in extension programmes. Ivoga, the women committee's president and the mayor's wife said, 'We're never involved in any MAF

programmes.' Any programme must be channelled through a village *fono* that allows men to advise their wives to participate in order to benefit the community. Those whose spouses are farmer group members participated and benefited from the programmes by conducting their monthly farm inspections and organising other activities.

### **(iv) Adequate resources and accountability of EOs**

MAF's extension service has long been perceived as being a waste of State resources. Farmers have access to the main office when requiring assistance. The EOs have been accused of being dishonest in performing their jobs. They usually did not live in houses provided in extension stations. It has been suggested to: 'remove houses as it's a waste of money on leases/casuals'. However, the EOs argued that they had 'no transport/living allowances'. It was observed that housing conditions were poor; the houses were unfurnished, with no electricity or water supply.

## **CONCLUSIONS, RECOMMENDATIONS AND IMPLICATIONS**

The Samoan Government has continually intervened in agricultural development since the 1960s, offering subsidies and price controls on the distribution of farm inputs and outputs to benefit the disadvantaged population. Farm inputs were subsidised and price support schemes were developed and made available through ASC to



provide a favourable environment to farmers. Due to criticisms of ASC's monopoly operation, recommendations were made that it should be privatised, which is consistent with the State economic objectives. The perception is that privatisation would eliminate subsidies, abolish a bonus scheme and reduce farmers' over-reliance on State assistance.

Predictably, the adoption of market liberalisation policies would strengthen a mutual partnership between the State and the private sector that would lead to a complementary extension service. Some of the functions presently run by the State (e.g. the MAF's extension service) would be more effectively run by the private sector. Private firms would deal with commercial farmers while MAF's extension service would provide services to smallholder farmers. In developing agricultural policies (ADB, 1995), the State must work closely with industries in which farmers have access to a range of services and job opportunities to improve agricultural development and rural life. Evidently, the public extension cannot be replaced entirely by the private extension but can be used to provide more incentives for private advice.

The community development (CD) approach initiated by the AusAID FSP is a mechanism to achieve community development through a multidisciplinary, comprehensive, holistic approach (Donovan, 1993). An extension system is unsustainable without complementary support

services, farmer participation and good national extension policy focusing on target clients, funding arrangement and integration of social issues. Ineffective extension systems adopted over the past decades are characterised as being over-ambitious schemes, with high recurrent expenditures and low community development. In the Samoan context, social collective system, land tenure, limited market development/opportunities, restricted access to centralised support services and an unreliable extension service, demand an integrated approach to support community development. Its success will result in less State intervention and expenditure. In other developing countries, the full participation of the State, NGOs, aid agencies and local communities through a series of democratic consultations facilitates an interdisciplinary approach and determines the delivery of services that respond to clients' needs and priorities. The role of the private sector, NGOs, farmer associations and co-operatives should be promoted. Private sector involvement is essential to abolish State incentives and subsidies and to develop a competitive, reliable extension service.

This study supports privatisation to allow free market competition, despite some concerns raised by various stakeholders. To be consistent with new economic policies on the promotion of agricultural commercialisation and partnership with the private sector, a public cost recovery system, as practised in Chile and Norway, should be initiated through

CBOs and progressive farmers, leading to a 50 : 50 cost sharing arrangement. The State can pay the staff salaries with the remainder funded by farmer membership fees. Sharecropping, as experienced by farmers in Ecuador, is another option where the production and transportation costs can be shared. These joint ventures would serve as demonstration plots and farmers would have access to inputs and better information. MAF's extension service should be subcontracted to the private sector, as practised in Zimbabwe and Chile, to provide the service with a small degree of cost-sharing between the State and farmers.

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