# Agricultural extension and the role of the private sector in Pakistan

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## Abstract

This paper briefly reviews the present state of agricultural extension in Pakistan with respect to the role of public and private sectors, particularly from the perspective of small farmers. It argues that both sectors have strengths and weaknesses of their own. The public sector extension services do not reach the bulk of the small farmers due to poorly motivated staff, inadequate operational funds, lack of relevant technology, top-down planning, centralized management, and weak accountability systems. On the other hand, the private sector extension services are targeted at big farmers and are primarily triggered by a profit-maximisation motive. The paper then presents a unique model of partnership between a private sector concern, a non-profit (rural support programme), and farmers, and argues that similar models could be adopted to make agricultural extension services work to the benefit of small farmers.

## Media summary

Poor smallholder farmers can be mobilized around community organizations that link them to private and public sector agricultural extension services and market chains, thereby leading to agricultural growth and the betterment of their livelihoods.

## Key words

Rural development, public sector, smallholders, community organisations, sugarcane

## Introduction

Agriculture is the mainstay of Pakistan's economy. More than 24% of the country's GDP comes from agriculture sector which also employs about 44% of the labor force, sustains almost 75% of the population, and accounts for 30% of the exports and 50% of the total foreign exchange earnings (Government of Pakistan, 2000). Since Pakistan has high population growth (more than 2.5%), a sustained growth in agricultural output and productivity is critical for its economy and social wellbeing.

The Agriculture management model in Pakistan is quite similar to other developing countries. The Ministry of Food, Agriculture & Livestock (MINFAL) through its provincial departments carries out most of the agricultural extension (Umali and Schwartz, 1994; Swanson, Farner and Bahal, 1990). The role of the agricultural extension service is to introduce new technologies, advise farmers on various aspects of crop production, supply inputs such as chemicals, fertilizer and seed, and provide services like crop and orchard sprays against pests and diseases. Pakistan has tried several extension models including the Village Agricultural and Industrial Development Programme (Village-AID Programme), Basic Democracies System (BDS), Integrated Rural Development Programme (IRDP), and Inputs at Farmers' Doorsteps Approach (Axinn and Thorat, 1972; Government of Punjab n.d.). Based on the traditional linear approach, these programmes have met with limited success and were abandoned one after another. At present, agricultural extension is modeled around a training and visit system, which relies on contact farmers to diffuse technical information to surrounding farmers (Ahmad, 1999; Ahmad, Davidson and Ali, 2000). However, the public sector has been criticized for its low performance and capability (Ahmad et al. 2000, Sofranko et al. 1988). It is argued that public sector agricultural extension is characterised by poorly motivated staff, a preponderance of non-extension duties, inadequate operational funds, lack of relevant technology, top-down planning, centralized management, and a general absence of accountability (Antholt 1994, Baxter et al., 1984).

The system is, however, undergoing transformation due to an increasing trend towards privatization of services. The inclusion of the private sector to ensure competition is gaining credence as one solution, especially with regard to agricultural input-supply firms. It is assumed that a market-driven extension service will provide the most rational and efficient mechanism to 'get agriculture moving' and usher in a second Green Revolution.

*Emergence of private sector in agricultural extension*

Until recently, the role of the private sector has remained minimal, though it has been growing in the past two decades. The active engagement of private sector in agricultural extension began after 1988, when the National Commission on Agriculture recommended to the government that "…the traditional role of the private corporate sector in providing material agricultural inputs and services needs to be strengthened and expanded to cover newly emerging needs such as specialised cultivation operations, spraying, and harvesting and to provide total package services rather than single inputs…" (Government of Pakistan, 1988).

In light of the commission's recommendations, Multinationals such as Novartis (better known as Ciba), Bayer, Hoechst and Huntsman began taking part in extension work as well as selling agricultural inputs. Currently, Ciba provides farmers with a total package of plant protection and has recently become the leading international agrochemical firm in Pakistan with 22% of the pesticide market (local 'generic' companies claim to control 60%). Their interest in providing extension services comes simply from their aggressive "marketing strategy" of selling the product and extension services as one package. This has brought in a lot of "vested interest" into private sector driven extension services.

Notwithstanding, the opening up of agricultural extension has had major impacts in Pakistan, not the least of which is the dismantling of the Government monopoly on delivering services and extension to farmers. Public extension is now one among many extension and service providers, although they remain the largest.

*Non Profits/ RSP involvement in agricultural extension*

Small and medium farmers comprise approximately 93% of the farming community in Pakistan with 81% cultivating less than 12.5 acres of land (Government of Pakistan, 1996–7). Commonly these farmers fall victim to either inefficient public sector extension services or the profit-oriented private sector, more concerned with serving the needs of larger, resource-rich farmers. Moreover, the private sector is reluctant to engage in the extension of alternative practices that undermine the sale of its products and services, even if they would benefit small farmers. Consequently, a number of non-government organizations (NGOs), rural support programmes (RSPs) and farmers' cooperatives (e.g. Saltland Water Users Association) are also seen to have started providing basic extension services although their focus remains small farmers and working with them after organizing them into community based organizations or community organizations.

Over the last two decades such community organizations (COs) - or organizations based at the level of the village or settlement - have grown rapidly in number and importance. While such organizations have always existed in some form, in the recent years these organizations have become actively engaged with development interventions and poverty reduction. One of the key factors in the growth of these organizations is the expansion of the work of "Rural Support Programmes" that foster the setting up of such organizations through a process known commonly as "social mobilization".

The rural support programmes (or RSPs, as they are commonly known) are national or regional developmental organizations, operating in 72 out of 100 districts in the country, and base their activities on partnerships with local community organizations. The RSP approach is designed around the concept of social mobilization. The RSPs as well as other development stakeholders in Pakistan have promoted the idea that COs should be active agents of economic intermediation. COs are quite often constructed around groups of residents who come together to participate in agriculture related activities. The CO acts as an intermediary between households or individuals and the service providers and markets. These COs

are village level platforms through which agriculture extension services can be delivered in an effective and efficient manner.

Through these COs the private sector can easily, and in a cost-effective manner, reach large number of households that are directly involved in agriculture related activities. Another advantage of working with these COs is that they have access to financial services that will ensure that financial incapability of the poor households will not become a impediment to acquiring the latest technology. The RSP borrows funds from the formal sector – a sector that is closed to the rural poor due to the high transactions costs involved. The RSP then transacts with the CO, which in turn transacts with its individual or household members. In addition, RSPs together with the public and private sectors play a significant in providing training programmes for farmers with low educational levels.

This model of market intermediation has become sufficiently important in Pakistan to be incorporated in the national poverty reduction strategy. The Khushali Bank and the Pakistan Poverty Alleviation Fund are two government initiatives that use the micro-finance model in order to provide credit to the poor. Both the programmes have been set up based on the experience gained through the RSPs, and are two important pillars of the Pakistan Poverty Reduction Strategy.

To illustrate how such a partnership model can work for improved agriculture extension services, a case study from Rahim Yaar Khan, a southern district of Punjab Province, is presented here.

*A case study of partnership between the public and private sectors*

In Rahim Yar Khan, wheat, cotton and sugarcane are the main cash crops. Mango orchards are abundant but are mostly owned by relatively large growers. Livestock is a secondary source of income in this area. Rahim Yar Khan lies at the tail of the irrigation system and often faces water shortfalls. Small farmers are especially prone to the irrigation water shortages. Cotton is a high-risk crop, often devastated by sporadic pest attacks and crop diseases. This affects the small farmers, who are left with little or no profit, accumulated debt, and worsened quality of life.

In contrast, sugarcane is a low-risk crop. However, it is irrigation-intensive and occupies farmland longer than any other crop. This increases the costs of production. The farmers also have to wait for longer periods before they get paid for their crops, because of their comparative disadvantage in marketing vis-?-vis the bigger farmers. There have been instances when farmers have had to abandon their production for a season due to delayed or non-payment by the sugar mills.

In response to the crisis, the local RSP together with the help of a local sugar mill (JDW Sugar Mills) identified a number of areas for actions, such as reducing costs of production, increasing land productivity, increasing the options available to small farmers, access to credit facilities, better marketing facilities, improvement in village level infrastructure, development of farm-to-market roads, and development of livestock assets. The RSP and sugar mill devised a strategy to help the small farmers. This strategy was refined and a project was conceived with the name of Sugarcane Productivity Enhancement Project (SPEP). JDW Sugar Mills agreed to finance the project. The project was initiated in 1999 and was the first joint venture between a sugar mill and a rural support programme in Pakistan. The project was initiated in four union councils, but after the pilot phase it has been expanded to 23 union councils, including two from Rajan Pur District.

The project is based around the idea of motivating small farmers to get organized into community organisations (COs). These COs now act as a vehicle for the project, around which all the interventions and activities are built. The project is following a two-pronged strategy, which aims at improving agricultural extension as well as improved livelihoods of the small farmers.

*Reduction in the cost of production / increase in land productivity*

A major issue for the small farmers is to cut their costs of production. Under the project, farmers under the umbrella of COs are introduced to new and cost effective methods of crop management. The CO members have been able to benefit from the project in the following areas: introduction of modern crop technologies, provision of good quality seed on credit/cash, provision of modern tillage machinery on 40% subsidy, introduction of intercropping, regular advice and guidance in the field, training/field days in various crop technologies, release of beneficial insects in the field of small farmers by mills, provision of pesticides on credit/subsidy to small farmers, and provision of micro credit for fertilizer/irrigation. Earlier, these services were available only to a few influential farmers, but now through SPEP a large number of small sugarcane growers are being benefited. Farmers are motivated to use fertilizer judiciously and save their costs by adding manures. Spacing techniques in sugarcane rows helps make the crops resistant to lodging, increases productivity and reduces costs of irrigation. In areas where farmers had not grown sugarcane before, farmers have realized the comparative advantage of growing sugarcane and have expanded their crop-area after the first year.

Micro-credit is provided to the CO members for purchasing fertilizers and irrigation water. It is provided without any collateral and at the doorstep. It is provided in two cash installments (through a bank), with 60% at time of cultivation, with the remainder provided after the field staff at the site verifies their crop. Supervision of the crop helps in attaining high yields. Credit is recovered out of the proceeds from the sale of sugar cane. Small farmers have proved to be loyal to the mills, if given choice of supplying to any of the three sugar mills in the district. This is due to the efforts of SPEP and support by the sugar mills. A recovery rate of almost 100% has been achieved and reflects on the effectiveness of the mechanism involved and trustworthiness of the small growers.

An assessment of crop yields from the last three years shows that small farmers are producing an average yield of 850 mounds per acre compared with the average of 700 mounds per acre for the whole area. It also reflects 200 mounds per acre increase in the average yield over the last three years.

*Marketing & development of village level infrastructure, more options available to growers*

In Pakistan, marketing conditions in a given year determine the area under crop in the next year. This is also true in sugarcane. Farmers feel relatively secure regarding price, as mills are bound to pay the rate fixed by the government (currently Rs 40 per mound).

The sugar millers usually focus on big growers or contractors for ensuring supply of cane to mills. Small farmers are neglected and they have to supply their cane at a lower price through contractors or through large growers. Few receive full price for their produce – often a small quantity – directly from the mills.

Under SPEP, this system was reformed. The participating mills improved its financial performance and ensured prompt payment to small-growers. SPEP helped to register the small growers and later made the supply indents available to them. It created positive competition among sugar mills. When small farmers were duly rewarded, they increased the area committed to sugarcane. Although, cotton is a short season crop and is easy to store and market, small farmers opted for a more dependable choice in the form of sugar cane.

The SPEP helped the mills identify the need for new roads after consultation with the farmers in the area. Farmer concerns were incorporated into the design and route of roads. People were also motivated through organized communities to give land free of cost for the construction of roads. As a result, a bigger number of growers, particularly in remote areas, have turned to sugarcane production. Previously, they were growing cotton or wheat, which were either intended for own consumption or were easy to transport, though not the preferred choice.

COs also have an opportunity to access the funds for development of their village level infrastructure. Many COs are showing increased interest in these projects. The communities manage the projects and they also contribute 20-30% towards the total cost. Most of the small farmers have so far opted for installation of electric turbines or renovation of their water channels. So far 32 such projects have been initiated, while others are waiting funding in the next phase. These opportunities have increased the level

of interest for unorganized farmers and now more people are joining in after witnessing the success of farmers who reduced their costs and saved water and time after completion of irrigation projects.

*Current status of the project*

With an experience of three years at hand, the project staff are better able to provide their services to the growers. The project is planning to expand its area of operation and the participating mills have decided to expand their crushing capacity, besides expanding their developmental activities, while keeping the focus on small farmers.

The SPEP has formed more than 400 COs with a membership of more than 5500 households. They have generated savings amounting to six million rupees and are using these to leverage funds from different donors for the development of small infrastructure.

*Evaluation of impact*

For measuring the impact of SPEP during the past three years, a survey, carried by an independent consultant, and based on a random sample of 104 growers was selected from 26 (2-3 years old) COs. Farmers had increased their farm size over the three years. Not only had they purchased land but a major change was observed in the land they managed under lease. Most of this land was brought under cane cultivation. Area under cane had increased three fold, while average yield showed an increase of 200 mounds per acres. In the second year their yield showed a slight decrease, due to rapid expansion in farm size. Farmers considered decline in the cotton area as major change in cropping pattern as a result of SPEP efforts. Use of machinery and fertilizer also showed significant change, as perceived by farmers.

More than 50% of the farmers considered credit as the major facility they received from SPEP. Training in various crop production technologies was also appreciated. Few identified the work in the irrigation sector, because at this time few irrigation schemes had been launched. When asked about utilization of the increased income most of them talked about re-payment of old debt. Others invested in building their irrigation system and investing in the profitable business of livestock. A significant increase was observed in assets. These results are yet to be compiled more comprehensively, however a general assessment shows the importance of the initiatives undertaken by SPEP.

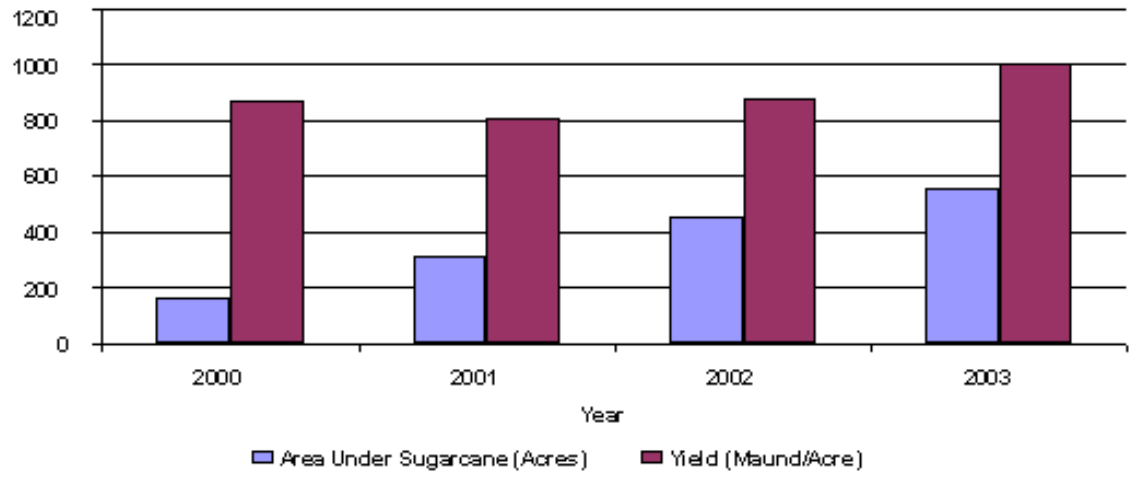


**Figure 1: Changes in Cropped Area (acres) & Yields (maunds[1] per acre)**

*Other Initiatives supported by the project*

Success of SPEP has lead to launching of other programmes in the field area, based on the need of the communities and using income from credit operations. The project is also working to improve community participation in effective management of public schools, focusing on increasing enrollment, reducing drop-outs, and improving the learning environment by investing in physical infrastructure and quality of education. Project teachers are being appointed for maintaining student teacher ratios and a teacher training programme has been initiated. Functional literacy and women credit programmes have also been launched.

*Conclusion*

Poor farmers often tend to be excluded from the public sector and private sector agricultural extension services for a variety of reasons. However, they can be mobilized around community organizations to link up with the public and private sectors, in order to achieve the economies of scale and to benefit the small farmers as well as the private sector. Partnership models, like the one from Rahim Yar Khan, can help in the process of technology diffusion and in the development of market chains, leading to enhanced agricultural productivity as well as quality of life for the small farmers.

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[1] A maund is a local unit of mass and equals 40 kilograms.