

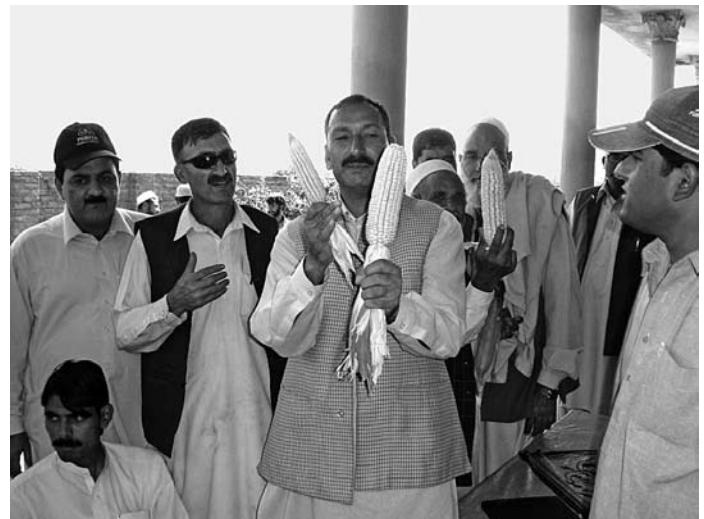
The role of the private sector in agricultural extension in Pakistan

by Muhammad Riaz¹

Agriculture extension in Pakistan was a sole public funded service for almost 40 years, during the period since its independence in 1947 till 1988. During this period successive governments experimented with several different models and styles of extension with the view to increase its efficiency but limited success was achieved. In 1988, a new experiment was tried, this time, to allow the private sector and especially the input supply companies to initiate their own advisory services along with their products delivery system. The idea was to gain impetus for commercialization of agriculture and attain food security. Today, after 20 years of this decision, there are several such companies successfully providing advisory services to the farming community and the experiment can be termed as very positive.

I. History of public extension system in Pakistan²

The first agriculture extension department in today's Pakistan was established in 1905 on the recommendations of the then Famine Commission set up to suggest ways for the development of agriculture in Indian subcontinent. Since then much changes and improvement have been tried in the advisory services in the country. Those after the independence were called:



Comparing open pollinated with hybrids on farmers' day.

- a. The Village Cooperative Movement (early 50ties)
- b. The Village Agricultural and Industrial Development Program (Village-AID Program, started in 1952),
- c. Basic Democracies System (BDS, 1959-1970),
- d. Integrated Rural Development Program (IRDP, started in 1970 and 1978 subsumed into Local Government Department),
- e. Training and Visit system

The agriculture extension service established under the T &V system has gradually weakened during the 1990ies. There were no proper facilities for regular backup training to the staff; no funds for traveling and daily allowances were drastically reduced, adaptive research farms discontinued, etc. Despite all such odds, the extension staff kept on maintaining limited contacts with farmers, organized field days and field seminars.

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² Adopted from "Operationalizing Agricultural Extension Reforms in South Asia" – A Case of Pakistan Presented at Regional Workshop Held in New Delhi, India May 6-8, 2003.

According to the power devolution plan of 2001, functions of all service delivery line departments including agricultural extension were transferred from provinces to the newly elected district governments. Today each district of Pakistan is now managing its agricultural extension services along with other sister organizations such as water management, fisheries, livestock, soil conservation, forestry, etc; under one manager called as Executive District Officer of Agriculture (EDOA). The EDOA reports to the District Coordination Officer (DCO) who is answerable to the elected District Nazim (administrator) whereas the line departments provide the technical backstopping and monitor the cross-district agricultural development projects. Agriculture Extension retains the subjects of agricultural training and information, adaptive research, in-service Training, plant protection and quality control, agricultural planning and statistics, and coordination.

In one province the public extension system has established a farm services center – a kind of farmer cooperative store/warehouse in each district with matching funds from grower members, to provide inputs at discount rates and share the profit. Among the 23 established such stores only 4-5 can be termed successful during a period of 10 years.

Besides the district extension services there are other long and short term, area based and country wide programs which also provide advisory services to farmers, like the Rural Support Programs (currently operating in 72 out of 100 districts in the country), donor funded programs and other government programs like the Horticulture Export Development Company, Agribusiness Development Fund (who are currently running a very large scale Global GAP program for citrus growers) and the Pakistan Dairy Development Company (working with commercial dairy farms, a public limited).

2. The Private sector³

In 1988 the Government of Pakistan appointed a commission to look into its poor agricultural performance. The commission suggested the inclusion of the private sector in reshaping agricultural extension: “The most important shift needed is to encourage the private sector to provide the total package services (specialized cultivation operations, spraying and harvesting) and not just the sale of specific inputs”.

After this permission, the advisory service has become a regular feature for most leading companies and a rough estimate suggests that almost 70-80% of the advisory services are being provided by private companies which have established their own independent set-ups to provide their advisory services. This includes a hierarchy of staff levels, which are fully equipped with computers, cell phones and transport facilities with appropriate operational budgets. Interestingly field level staffs do not have office premises, perhaps to encourage active interaction with the clientele. The performance of the staff is strictly monitored with random spot checks and incentive packages. Also field staff of different companies coordinates and cooperates on occasions with each other. The field staff also coordinates with important stakeholders like local NGOs, research stations and public extension personnel for information sharing and participation in each others events.

The input companies focus their advisory service mainly on use of their company products while the processing companies focus their services mainly on the crops which they will use as raw material. In this way the services become very specialized and perhaps more effective. They use demonstration plots, field days, individual farmer visits, group meetings, large farmer gatherings, exposure visits, website and pamphlets as methods and tools for extension. These advisory services by the private companies can be summarized as follows:

1. Plant protection: mainly by pesticide companies who cover most important crops.

³ Information on the advisory service of the private companies was obtained by discussing with the company representatives in the field and complemented from data on their websites.

2. Plant nutrition: mainly by fertilizer companies who cover most important crops
3. New and improved seed variety introduction and adoption: by national, multinational seed companies and national public seed corporations.
4. Whole crop production cycle:
 - a. Sugarcane by sugar mills, 72 such in the country
 - b. Tobacco by tobacco companies, 2 multi-nationals and 6 national
 - c. Maize by corn processing companies and by seed companies
 - d. Oil seeds by edible oil processing companies and oil seed development board
 - e. Milk by national and multi national companies and public bodies
5. Credit: Micro finance institutions and commercial banks

The point of contact in an area is usually a progressive farmer who is well respected by the neighboring farmers and willing to share the new knowledge with other farmers. Most progressive farmers have the largest of the landholdings for their geographical area.

3. Examples of advisory services of private companies

A) Syngenta Pesticides

Syngenta has two separate advisory services: one for its pesticides and one for its vegetables seeds. Syngenta pesticides started its business operations in Pakistan in 1972 and are today the single largest company (among 500 pesticide companies) with 22% market share. Syngenta products are claimed to be of superior quality and are relatively more costly for the farmers. To be successful in marketing its products, the company relies heavily on its field promotion. For this the company has designed a well developed set-up. Their interest in providing extension services comes simply from their "marketing strategy" of selling the product and the extension services as one package.

The Set-up: The country is divided into 4 zones, each zone is divided into 3-5 regions and each region is divided into 5-15 territories depending on the scale

of the targeted crops grown. The territory level staff consists of a Technical Sales Officer (TSO) and several Field Officers at a village level. The TSO and his boss at the regional level are agriculture graduates while FOs have 12 years of school and prior experience of farming in the area. To enhance its outreach the company selects and trains a certain number of farmers called *host farmers* (50-100 per territory) to be used as focal points for the company advisory service and product promotion.

Regular trainings are given to the field staff in crop management and pesticide use, organized by the company training department working under the research and development department. The Research and development department is mainly responsible to coordinate with the government research for the two years mandatory verification trials for its new products before it is launched in the market. After the approval from government, a large number of verification demos are held with progressive framers. And when it gives good results the product is handed over to the field force for large scale promotion.

Supply chain: The company used to supply its products through a network of traditional dealers. Facing several problems with this system the company decided a fundamental change, by launching its own franchise system called *Naya Saver* (new dawn).

There are three categories of the franchise based on the scale of potential business in the area. Each franchisee is bound to sell only Syngenta products. The franchisee is allowed a fixed commission of 8% on the retail price and an additional 2% for achieving sales targets, support in company promotion, compliance with policy guidelines and contributing to providing advisory service to farmers. The 2% is permitted after approval and transferred at the end of the year. The company started with opening up 300 franchise outlets in 1997 and has increased it today to 700. Nowadays it is strictly prohibited for conventional dealers to sell Syngenta products.

The company staff holds regular monthly meetings and workout a detailed schedule of activities based on the review of the current situation. This model has allowed the company to enhance its advisory services,

whereby its outreach has further increased. Other companies have now also adopted this model and have opened their own franchise system e.g Beyer has *Sohni Dharti (beautiful land)*, FMC *Sunehra Dawar (golden age)*.

Advisory service: Syngenta advisory service has the following objectives: (1) introducing new pesticides on to the market; (2) providing technical services to progressive farmers on their doorsteps concerning the safe and judicious use of pesticides; and (3) conducting free pesticide trials at progressive farmers' fields and arranging field days to show the results of the pesticides including IPM trials on cotton crop.

To educate farmers in the use of pesticides and other agronomic practices the company uses extension methods like:

- group meetings of 20 farmers at village level and 50 farmers at higher levels,
- demonstration sites (10-20 per territory),
- (harvest) field days
- make personal visits (visiting 6 farmers per day is mandatory for each field staff)
- make and receive personal calls
- mailing crop guides and pamphlets

B) Syngenta Seeds

Syngenta seeds started its advisory service in 2003 and they are working almost with same set-up as for pesticides. The product supply however is managed through a network of selected dealers, spread throughout the country. The company currently provides only hybrid seeds and has achieved around 45% share in the tomato, cucumbers and squashes market. The seed is mostly imported, from company own sources abroad.

The company uses different methods to create awareness about company products and train farmers in its proper use, these include:

- Bringing/inviting farmers to company established model farm to see the under tunnel (low, high and walking-in) production technology.
- Help farmers establish such tunnels on their farms.

- Arrange visits of its colleagues from the pesticide operations for problems related to pests and diseases.
- Provide guidance to other programs interested in supporting farmers in establishing under tunnel farming.
- Establish demonstration sites at strategic locations and hold field days to show case the good results of tunnel and open field production where the companies recommendations have been followed.
- Make visits to potential new users of the company seeds and educate them about the benefits.
- Make visits to existing users and give advice on the spot. For the company field staff, visits to 25 such user per day are mandatory.
- On all the above occasions company prepared crop guides are shared with farmers for ready reference.

The company staff is critical of the public extension service and does not see any benefit of working with them.

C) Fauji Fertilizer Company (FFC)

FFC has been providing Agricultural Advisory Services to the farming community throughout Pakistan since 1981. It maintains regular contact with farmers and Agricultural Institutions to ensure constant and efficient transfer of latest technology. FFC believes in selling a programme rather than just a product. For this, the company has adopted a customer oriented strategy, marketing quality products backed by efficient and effective support services with emphasis on developing the market through practical and innovative farmer education. FFC is the only fertilizer company which operates all over the country with an extensive network of field warehouses and dealer networks (3200 dealers). The advisory service uses field days, farmers' group meetings, seminars and demonstration plots, crop documentaries, complete production guide books on several important crops in local language. Some of this extension material is also available on the Company's website.

Besides this, the company has another valuable service for the farmers. Mobile soil and water testing

laboratories, moving from region to region help farmer's fine tune their usage of fertilizers based on the results of their soil analysis. Some 60,000 soil samples were tested by such a facility in one region (North Western Frontier Province) during the three years period (2007-09) spent there.

D) Lakson Tobacco Company

In northern part of Pakistan tobacco is an important crop, grown mostly by small farmers (under 10 ha). There are 13 companies who purchase farmer produce among which two companies Pakistan Tobacco and Lakson Tobacco (an affiliate of the Philip Morris International Inc.) also run an extensive tobacco leaf agronomy program in the tobacco growing areas.

The advisory service: With the aim of increasing the quality, quantity and yields of tobacco the company has established a fully fledged advisory service specializing in tobacco production. The service is run by a well designed set-up with well trained agriculture graduates at the higher levels and less educated but well experienced staff at the lower levels. The senior staff gets regular training from subject matter specialists and the knowledge gained is passed on to the lower levels. Thus the staffs are kept abreast with the latest knowledge and development in the technology of tobacco production.

Due to its operations in the area over the years, the company has established good contacts with the local farmers and has very good knowledge of the farmers' situations. Even the company has developed a detailed database of the tobacco growers, including information on their family and crops. The company uses several methods to educate farmers about the crop production and processing methods.

In the beginning of the season it holds a large gathering of farmers, where company policy, plans (purchase targets), bench mark prices and support packages are shared with the farmers. Farmers are given the opportunity to talk about the problems faced during the last seasons and if they have suggestions for further improving the working of the company. During the season, the company holds group meetings at village level around critical stages of the crop production (nurs-

ery management, transplantation, crop production, harvesting, curing and grading).

Besides the above more general advisory service, the company provides additional support to farmers who enter into contract growing agreement where Philip Morris's strict production and processing protocols are mandatory to follow. This support includes regular weekly personal visits to farmer's site for on the spot advice and provision of free open pollinated seed and subsidized hybrid seed, credit guarantee to banks for fertilizer and pesticides on credit (to be deducted from sales) and free protective equipments and purchase of produce at better rates.

The company also works on finding out crop rotations around tobacco that enhances farmers' incomes, e.g. Tobacco with squashes or maize, and wheat with tobacco etc. The company claims to have contributed significantly to the safe use of pesticides during husbandry and curing of tobacco.

E) Pioneer Pakistan

Pioneer specializes in cereals and is the leader in corn hybrid seed in the country. Besides corn, it also supplies hybrids of millet, mustard and rice. The Company arranges its seed through a network of selected input dealers, spread throughout the country, which is procured mostly from company own international sources.

Pioneer has also established its own set-up for providing its advisory services. It consists of agronomists at the senior levels and non agriculture graduates at the village level. Each field officer is assigned 70 farmers, who make 2-3 visits per season to each one of them for direct guidance on their farms. The company uses different methods to create awareness about company products and train farmers in its proper use, these include:

- Introductory sample demonstration plots of half acre size in new areas, under full supervision of the company.
- The company also holds regular training events for its dealership network to train them in crop technology and also hear problems faced by them and their client farmers.



Demonstration of hybrid maize from Pioneer Pakistan.

- Joint training of farmers with other private sector actors like Fauji Fertilizer Company and the public extension service. In the later case, the company sponsors the event.
- Arranging exposure visits to best practicing farmers in other provinces especially to Punjab and other nearby districts.
- Regular harvest field days.
- Sample demonstrations with free inputs and supervision in new areas and new farmers.
- Farmers are provided with free inputs and supervision in comparison to other competitors, to give the farmers the chance to judge the difference directly.
- Pre-season farmers' gatherings to share company plans, new hybrids, and production technology and to hear farmers' complaints and suggestions. Here company brochures and pamphlets are distributed.
- A corn Mela is organized once a year, where stalls are provided to farmers for displaying their farm yields and where videos are shown and lectures are given. Farmers get the chance to discuss their problems and suggestions and learn from other farmers' successes.

The company claims to have introduced line sowing of corn in the country and introducing double cropping of corn (winter and spring season cropping).

Successful results of intercropping experiments are being shared with farmers, e.g. tomato, sugarcane and strawberry intercropping into maize crop. The company regularly updates its self on the demand of the end users of the corn and shares this knowledge with its contact growers. It kept farmers informed of bird flu as the reason for fall in demand and prices for their corn as poultry feed (large stocks of poultry birds were culled). Again when the demand started increasing, the company kept the farmers informed on daily basis.

F) Marketing

Super store chains like METRO and MAKRO procure its fresh fruits and vegetables supplies directly from farmers. Farmers must comply with the quality standards of the company. This new marketing system has forced the farmers to adopt new post-harvest management skills i.e. cleaning, grading, packing, and packaging. In summer 2010, METRO will start with a pilot program cooperating with a third party for providing paid advisory services to farmers on production technology. This company will form clusters of farmers in close proximity and will collect the produce from a central collection point. The company will pay some percentage share from the market margin plus the production cost as the price to the farmers. Upon the completion of the pilot period the company will review it and will decide the next plan.

G) Dairy companies

Nestle, Hala, Engro are providing complete guidance on animal husbandry to milk suppliers, usually small individual farmers having 1-5 buffalos or cows in central Punjab province. According to one estimate there are 8 million small cattle farmers in the country.

Nestle restructured its agricultural services in 2005 so that it now consist of over thirty full-time agronomists, 56 veterinary doctors and agricultural engineers to help the farmers (mainly in Punjab province) with their milk production by offering different trainings from fodder production, hygiene and milking practices to constructing cowsheds. Nestle cooperates with local NGOs to train para-vets and artificial

insemination. The company also bears the cost of interest (9%) on loans buying high quality cattle, if the farmer agrees to sell the milk to company.

Since farmer's wives are crucial in every milk-producing farm, the company has created seven teams of three women each, all trained vets, sociologists and specialists in animal husbandry. Their task is to meet farmers' wives and empower them through training in milk production, animal husbandry, and hygiene, and to give them an understanding of Nestlé's milk collection system. According to the company, its advisory service is bringing a quiet revolution in Pakistan's milk producing districts.

Milk collection system of Nestlé:

Step 1

A small farmer in rural Sheikhupura district milks his buffalo twice a day and takes about 4 liters to one of Nestlé's 2'500 Village Milk Collection Centers.

Step 2

At the Village Milk Collection Centre the farmer's milk is poured into aluminum churns. The agent checks the milk's freshness and purity, and enters the quantity into the farmer's logbook. He takes it to one of Nestlé's 1'900 Secondary Reception and Cooling Stations, about 2-4 kilometers away.

Step 3

The Secondary Reception Station has a large electrically powered cooling tank. A milk inspector measures the fat content, the non-fat solids content, and the milk's acidity. Once satisfied, he takes the milk to one of 27 Main Reception and Cooling Stations.

Step 4

At the Main Reception and Cooling Stations the milk is poured into huge tanks and is thoroughly checked for quality. The milk is dispatched to the factories.

Step 5

At the Sheikhupura and Kabirwala factories, the milk is processed and packed into the familiar Nestlé cartons one can find in the grocery stores. It is checked for quality before being released for sale. Some is processed into yoghurt, powdered milk, or other dairy products.



Introducing hybrid maize by Pioneer Pakistan.

4. Farmers-findings on diversity of service providers

The aim of this small survey was to gain some idea of the farmers directly about service quality and delivery to assess the success of the policy of opening up the advisory service to the private sector. We mainly talked to smallholders, with irrigated agriculture growing maize, wheat, sugarcane and tobacco as the major crops. Some vegetables and orchards are grown for market while fodder for livestock is also grown. Major livestock include buffalo followed by cows mainly for milk for home consumption and sales in times of distress.

The farmers mention that in most cases the advisory services are provided by the private sector while public extension service is rarely available. Following private sector companies were mentioned for their respective service.

- a. Pioneer, invited the farmers to a training day on the cultivation of hybrid maize. It is due to the efforts of these companies that more than 90% of the open pollinated crop is replaced by the hybrid maize. Although hybrid maize is more costly to produce for the small farmers but since it has 3 times more yield, they are willing to invest.
- b. Local sugar mill provided them good quality seed from its farm (with the promise that the farmer will sell the crop to the mill), introduced to them cultivation on a new row to row distance technique,

provided new sugarcane variety and provided free of cost beneficial insects for biological control of pyrilla control.

- c. Pesticide dealers and company field staff guided the farmers in selecting proper pesticide and application methods for control of pests and diseases.
- d. The two Tobacco companies' field staff was available round the clock for guiding farmers in tobacco crop production. Tobacco growing requires high care and farmers need real incentive (including good prices) to remain engaged.

Compared to the so many private sector actors, only one farmer mentioned that the field staff of public extension service guided him in selecting and applying chemical fertilizer for his crop. However in this case the farmer gave him farm produce in return. One other public sector department which provides subsidy for lining of irrigation water channels was also mentioned by a few farmers.

About the quality (accuracy, reliability and availability) of the services, the farmers were all appreciative of the private sector while they were very critical of the services (if any) from the public sector. Public extension staff goes to farmers who can return favours and is not regularly available. They opined that without the private extension services the productivity of the farming will be substantially affected.

The village society is very closely connected and new knowledge and information is quickly shared among farmers, who either meet in the mosques, during village rituals (every body attends every body's marriage and funerals) or while resting and chatting in the sitting place (Hujra or Dera) of the progressive farmer open to farmers of the clan.

5. Conclusions

This short review of the situation suggests that most advisory services in Pakistan today are being provided by the private sector and thus has effectively replaced the public extension service. Farmers seem to trust the information from the private sector as they find it more relevant, up-to-date, accurate and timely for their situations compared to those from the public sector.

More and more companies are opening up their own advisory services, perhaps encouraged by the success of the leaders in the market. Also more uniformity appears to be happening in the services of companies as they share and learn from each other.

There is a criticism that private companies also serve only large farmers and therefore small farmers' needs are not served. This criticism however needs to be observed with caution. It is not economically feasible for any agency to reach to thousands of small farmers in developing countries like Pakistan. It is a tested strategy to work through more progressive farmer, who then can pass this information to other fellow small farmers, with whom they are socially so well connected, based on the traditions of the village societies.

The private sector has to be allowed to play its role in providing the advisory services, at a stage when the public extension system cannot cope with the demand due to increasing intensification and commercialization of agriculture triggered by growth in population and the rise of high income middle class (estimated at 5-10 million today for Pakistan). Based on the farmer's interviews and observations it can be said that the the public extension system is not effective (its advice is not current, sound and timely). It is not funded properly, the operational budget is meager, its management system is bureaucratic, and staff salaries are very much below the market. Staff moral is low and good quality people would leave /choose other better options. Same is the case with agriculture research. In the past, there were not many opportunities for young agriculture graduates in the private sector and so it was an honor to work with the public agriculture departments. Now it has changed dramatically and all smart guys are joining the private sector for the better packages.

But the situation should be analyzed in more depth to find out what advisory services needs of the farmers are not yet fulfilled and to evaluate whether the public extension service should be reorganized to provide those services and even expand its mandate to facilitate the private sector in its new role. Or is there no need of a public extension system altogether and remaining needs can be replaced with one or more specialized private service provider(s)?