

3.3 The Agriculture Department's Services to the Farming Community of Sindh ⁸

Badruddin Soomro⁹
Krishna Mehraj¹⁰

3.3.1 Historical Context

The Sindh Province is renowned as one of the centers of an ancient civilization. Archeological findings in Moen-Jo-Daro revealed that wheat, barley, peas, sesame and cotton crops were grown in the Sindh Province about 3000 BC. Agriculture has remained the mainstay of the economy for the people of the area since very early times.

The Agriculture Department, which existed in the Bombay Presidency, was made to form part of the administrative setup of the Sindh Province when created by its separation from the Bombay Rule during the early 19th century.

The Sindh Agriculture Department also included Food and Livestock Sub-sectors in those pre-partition days. The other institutes include

- Livestock Experimental Farm, Karachi (1921)
- Agriculture Research Center, Sakrand (1926)
- Fruit Farm, Mirpurkhas, (1928)

In 1932, agriculture in the Sindh Province witnessed a real boost when the Lloyd Barrage, now the Sukkur Barrage, was commissioned. The Sukkur Barrage has more than 7 million acres of command area, and is the largest irrigation network in the world.

The Agriculture Department continued to form part of the administrative set-up of the Sindh Province when Pakistan gained independence in 1947. The set-up continued after independence in 1947 until the formation of One Unit in 1958, when Pakistan's western provinces merged into one unit and named West Pakistan. Upon the abolition of One Unit in 1970, four provinces, including the Sindh Province, were established. In the new set-up, the Agriculture Department existed along with other sub-sectors like Food, Livestock, Poultry and Fisheries.

From time to time these sub-sectors, i.e. Food, Cooperatives, Livestock, Poultry, Fisheries and Wildlife, have either been included or removed from the Agriculture Department's administrative setup. In 1996, the Agriculture Research component was separated, thus forming a separate Department of Science and Technology.

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⁹ Secretary, Agriculture Department, Sindh Province

¹⁰ Deputy Secretary (Technical) Agriculture Department, Sindh Province

The Department of Agriculture has the following units:

1. Sindh Agriculture Extension Services
2. Agriculture Engineering and Water Management
3. Sindh Seed Corporation
4. Sindh Agriculture Supplies Organization
5. Bureau of Supplies and Prices
6. Cane Commissioner, Sindh

The province has a cultivated area of 5.9 million-hectares, of which 3.92 million-hectares are actually cropped. About 2.54 million-hectares are irrigated through canals and tubewells.

The overall objective of the Department of Agriculture is to increase the production of agriculture commodities in the province.

3.3.2 Sindh Agriculture Extension Services

The Agriculture Extension Service is the oldest organization under the Agriculture Department. The main objectives of the Extension Services are:

- To disseminate technologies concerned with all aspects of cultivation, management and marketing crops to growers' doorsteps through personal contacts and various means of mass media.
- To educate and train the farmers in modern sowing techniques, irrigation and fertilizer application, insect, pest and disease control, harvesting and threshing crops.
- To serve as a resource base for agriculture knowledge and provide information to growers on issues like insect pest outbreak and weather conditions, whenever required by them.
- To introduce new crops and varieties, fertilizers, pesticides, weedicides, farm machinery and tools to farmers.
- To coordinate with input-supply organizations for the timely availability of farm inputs to growers.
- To prevent the adulteration of pesticides.
- To implement area production targets and to collect agriculture statistics.
- To enforce the Agriculture Produce Market Act 1939, and rules and regulations framed thereunder to establish markets and arrange open farm produce auctions.

The Director General heads the Sindh Agriculture Extension Service. The office is located in Hyderabad. There are five Directors under the Director General, i.e.:

- Director, Coordination
- Director, Adoptive Research
- Director, Agriculture Information
- Director, Agriculture Training
- Additional Director, Monitoring and Evaluation

There are three Divisional Directors. They are located in the following locations in Sindh.

- Director Agriculture Extension, Hyderabad Division
- Director Agriculture Extension, Sukkur Division
- Director Agriculture Extension, Larkana Division

The Divisional Director supervises field extension activities in their respective divisions. A Deputy Director, Agriculture Extension, exists in each division. Assistant Directors, Agriculture Extension, work at the sub-divisional level. There are three to four Agriculture Extension Officers in each *Taluka* and Field Assistants in each *Tapa*.

3.3.3 Agriculture Engineering and Water Management Wing

Agriculture Engineering and Water Management are two separate units under the Director General of Agriculture Engineering and Water Management Wing. The objectives of this department are:

- To provide bulldozers for land development to farmers and improvement at fixed government subsidized hire rates.
- To render drilling services to farmers for the installation of tubewells for ground water exploitation.
- To guide and assist farmers with on-farm mechanization.
- To bring physical improvements in the water delivery and distribution system so as to minimize conveyance and on farm water application losses.
- To improve water delivery efficiency
- To utilize the saved water profitably in order to increase cropping intensities as well as crop yields contributing to increased farm households income.

The department's headquarters is in Hyderabad. A Director, Coordination, assists the Director General. The four directors in the field are:

- Director, Agriculture Engineering
- Director, OFWM
- Director, OFWM, OECF (Japan-assisted)
- Director, OFWM, NDP project

Water Management: In response to the occurrence of heavy conveyance losses of irrigation water from those watercourses, the concept of on-farm water management was introduced in 1974. An On-Farm Water Management Unit was established under Agriculture Engineering Services. The OFWM Unit was assigned the function of watercourse improvement, or lining, and farmland leveling. There are 40,364 watercourses in the Sindh Province. At present, only 7246 watercourses have been lined or improved.

The Agriculture Engineering and Water Management Wing, Sindh Province, commissioned the International Irrigation Management Institute (IIMI) to undertake an action research program for three pilot trails on Water Users Associations in the LBOD. This is based on the government's

policy to involve water users in participatory management in O&M, and to manage irrigation and drainage systems. The pilot project aims at establishing three Water Users Federations (WUFs) to take over the whole responsibility for O&M of three selected distributaries or minors. These pilot projects are along the Heran, Bareji and Dhoro Naro Distributaries in the districts of Nawabsahah, Mirpurkhas and Sanghar.

Despite achieving encouraging results, IIMI could not reach the overall goal due to the non-transfer of the management of selected distributaries to WUFs as required under Joint Management Agreements by the Provincial Irrigation Department.

3.3.4 Sindh Agriculture Supplies Organization

On the dissolution of West Pakistan Agriculture Development Corporation (WPADC), the Sindh Agriculture Supplies Organization (SASO) was established as its successor in 1973 to ensure prompt and regular supplies of the basic inputs for agriculture, like fertilizer and quality seed. Recently, the distribution of pesticides and farm implements has also been added to its functions.

The objectives of SASO are:

- To make suitable arrangements for the procurement, transportation, storage and distribution of improved seeds and fertilizers in the province.
- To carry out surveys for problems related to the use of fertilizer and seeds in any particular area.
- To publicize the effects of certified seeds and chemical fertilizers over agriculture production.

The SASO is a self-financing organization governed by a Board of Directors. The Minister of Agriculture is the ex-officio Chairman. The remaining Board of Director members includes Secretaries from the Agriculture and Finance Departments. The Managing Director of SASO functions as the Board's Director/Secretary. The government nominates two farmer members as Board members. Three directors assist the Managing Director, i.e., for Finance, Operation and Inspection, Stock and Recoveries.

3.3.5 Sindh Seed Corporation

The Sindh Seed Corporation (SSC) was established in 1976. The objective of the SSC was to process and sell quality certified seeds for wheat, paddy and cotton to growers.

The SSC is governed by the Board of Directors and headed by the Minister of Agriculture. Other Board members comprise Additional Chief Secretary (Planning and Development Department), Secretaries (Agriculture and Finance Departments), representatives from seed growers and seed distributors. The Managing Director also acts as the Secretary of the Board. Four other directors assist the Managing Director, i.e. Director Production and Processing, Director Marketing, Director Administration and Director Finance.

3.3.6 Bureau of Supply and Prices

The Bureau of Supply and Prices (BSP) was established in 1979. The objectives of the BSP are:

- To ensure improved planning and execution coordination and price stabilization.
- To discourage cartels and monopolistic trade practices by rendering advice to concerned agencies.
- To establish fair price shops and consumers' cooperative stores in collaboration with related organizations.
- To administer Sindh Standard Weights and Measures (Enforcement) Act, 1975 and Rules framed thereunder.

The functions of the BSP are to organize weekly bazaars where the farmers can sell their produce. Such activities help to protect both, farmers and consumers, from middlemen, and check the weight and measuring instruments to safeguard the interest of the consumers. Measures to stabilized prices are also introduced and managed here.

3.3.7 Cane Commissioner

The enforcement of the Sugar Factories Control Act, 1951, and Rules was being implemented by the Director, Agriculture Extension of Sindh as ex-officio Cane Commissioner. The establishment of large-scale sugar industries in the province required more attention due to the increase of the size of sugarcane crops and related problems. A full time position for a Cane Commissioner was created in 1984 for the enforcement of Sugar Factories Control Act and Rules to safeguard the interest of the growers.

3.3.8 Recommendations

The Agriculture Department has been serving the farming community for many years. In order to provide better services and upgrade the department, the following recommendations are made:

- Pre-service Intensive Training Programs for new staff, and in-service training to update staff knowledge are to be regularly organized.
- Better linkages and coordination with sister organizations are to be established.
- The provision of reward and punishment is to be strictly observed.
- Decision-making at appropriate levels is to be encouraged.
- Sufficient budgetary provisions are to be made available.

3.3.9 Specific Recommendations for the Coordination of Agriculture and Irrigation Services

- A Joint Management committee may be constituted, consisting of members from the Irrigation and Agriculture Departments and farmer-representatives to identify and redress problems occurring from time to time, and to ensure the sustainability of the huge irrigation network.
- Supplies of irrigation water are to be delivered through integrated relations with the

Agriculture Department's field staff and Farmer Groups, ensuring the equitable distribution of water from the head to tail.

- The Agriculture and Irrigation Departments may be put under the administrative control of Additional Chief Secretary(es).

3.3.10 Discussion: Questions and Answers

Question: Dr. Waqar Malik. Would Mr. Badruddin like to say a word on the Agriculture Research System in Sindh? What Department or Agency is working with it? You have not mentioned research.

Answer: Research also needs to be coordinated.

Comment: Mr. Masood, World Bank. As a general comment on coordinated irrigated agriculture, I thank IIMI for bringing this issue in a forum for deliberations. A few years ago nobody was ready to listen to such things. I am happy that I now see people thinking along the lines of Participatory Irrigation Management (PIM). There is a way to solve these issues. A change has to take place from a dictatorial to participatory one. I place emphasis on the need to empower the farmers. They will tell us what is to be done. I suggest that the paternalistic approach be abandoned. Furthermore, placing the PID and PAD under an Additional Secretary for coordinated services is again adopting a paternalistic approach. It is better to empower the farmers than putting PID and PAD under an Additional Chief Secretary.

Question: Hafizur Rahman Kazi. Mr. Somroo stated that there is a need to bring back a research system to the Agriculture Department, whereas Mr. Gill talked about integrating research education and extension. Where do we stand on this issue? In the NWFP, research was transferred to the Agriculture University in 1986. There are problems. Can consensus be achieved in this respect?

Answer: Mr. Gill. Mr. Soomro suggested merging Research, Education and Agriculture Extension as was adopted in India, where it worked well. This does not mean that every model can work everywhere. He further added that the NWFP tried this approach, but that it does not work satisfactorily. He agreed that there is a need to look into it. There is a need to evolve a common consensus.

Question: Akhtar Bhatti. The Agriculture Extension Department is organized on a district basis, whereas the PID is organized on a canal command basis. To both, Mr. Gill and Dr. Soomro, how do they feel about reorganizing Agriculture Extension on a canal command basis? Will this not help to improve the coordinated services for irrigated agriculture?

Answer: Mr. Gill. Per canal command or district level is not a boundary, but the commitment and determination to help farmers. This situation alone will help improve the condition.

Question: Syed Akhtar Hussain, PID, Punjab Province. Many Agriculture Department staff like Agriculture Officers exist, but they are seldom available to the needy farmers. A field tour of the Agriculture Department Staff (Field) should be regulated and ensured to solve the Irrigation and

Agriculture Departments' problems. Both, the Agriculture and Irrigation Departments should work together.

Comment: Waheed-uz-Zaman. The lack of coordination exists at all levels.

Comment: Niaz Hussain. The integration of the PID and PAD suggested by Dr. Somroo sounds fine, but real change can only occur when functionaries change their behavior to all those partners in development. Government functionaries may be oriented towards participatory development and should give due consideration to the needs of the farmers, the ultimate beneficiaries. Capacity building for functionaries and training for farmers in consumptive use of water should take priority.

Moderators' Remark: There are key actors in coordinated agriculture services. They are PID, PAD and farmers. There is a need to see how these actors can play their roles effectively. Technology should be transferred to the users. Farmers need to be recognized as potential partners. This will help strengthen capabilities and improve productivity. We need to think of durable institutional reforms where these three actors can play a meaningful partnership role for increased agriculture productivity and irrigated agriculture.