4 Extension services for smallholders

4.1 Introduction

As noted earlier in this monograph, the vast majority of Pakistan's farmers are smallholders, owning less than 5 hectares of arable land, whose livelihoods depend mainly on agriculture. Owing to continuous fragmentation of land, the number of small farms has been increasing rapidly from 68% of all farms in 1972 to 89.5% by 2010. In the dairy industry, 74% of cows and 68% of female buffaloes are held on farms with less than 5 hectares of land. Orchards with an area of less than 5 hectares account for more than 85% of all orchards. Low productivity of land and labour in Pakistan's agricultural sector has been a concern for policymakers for many years. For example, the Panel of Experts advising Pakistan Planning Commission on agriculture marketing and post-harvest management pointed out that after almost four decades of the 'elite farmer' strategy, stagnation in land and labour productivity was a major concern in Pakistan, and that Pakistan's agricultural productivity could be increased if the small and medium farm sectors were properly supported (Government of Pakistan 2009).

Growth in household incomes of small farmers has also been poor and even negative for some households over the past decade. Data from the Household Income and Expenditure Survey of Pakistan in Table 4.1 show real monthly incomes of rural households in the first quintile (bottom 20% by income) for 2005–06 and 2015–16. We assume all small farmers fall into the first quintile. These figures show that:

- while the income of quintile 1 households increased in Punjab at the rate of 2.4% per annum between 2005–06 and 2015–16, it decreased at the rate of 1.2% per annum in Sindh during these years
- the composition of household income also changed differently in the two provinces; while in both provinces wages and salaries contributed 40.5% of household income in 2005–06, in 2015–16, share of wages and salaries decreased

Table 4.1 Real household monthly income (Pakistan Rupees), rural quintile 1, 2005–06 and 2015–16, 2005–06 prices*.

	2005–06	2015–16	Change (% p.a.)	% share in total household income		
				2005–06	2015–16	Change (%)
Punjab						
Wages and salaries	2,525	2,824	1.1	40.5	35.7	–4.8
Crop production	1,396	977	–3.5	22.4	12.4	–10.0
Livestock	808	1,296	4.8	13.0	16.4	3.6
Other non-agricultural	481	919	6.7	7.7	11.6	3.9
All other income	1,020	1,892	6.4	16.4	23.9	7.5
Total	**6,230**	**7,907**	**2.4**	**100.0**	**100.0**	
Sindh						
Wages and salaries	3,178	3,518	1.0	40.5	50.4	9.9
Crop production	3,082	1,760	–5.4	39.2	25.2	–14.0
Livestock	787	713	–1.0	10.0	10.2	0.2
Other non-agricultural	194	131	–3.8	2.5	1.9	–0.6
All other income	614	859	3.4	7.8	12.3	4.5
Total	**7,855**	**6,982**	**–1.2**	**100.0**	**100.0**	

Source: Pakistan Bureau of Statistics (2016).

to 35.7% in Punjab, but increased to 50.4% in Sindh

- the contribution of income from 'crop production' decreased in both provinces, but by a higher margin in Sindh, where it fell to almost 25%
- the contribution of income from livestock increased in both provinces, but it increased by nearly 4% in Punjab and by only 0.2% in Sindh
- in Punjab, the share of 'other non-agricultural' income also increased by 3.9%, but in Sindh it went down by 0.6%
- the contribution of 'all other income' increased in both provinces, but again by a larger margin in Punjab than in Sindh.

As a result of these changes, incomes of quintile 1 households were higher in Punjab than in Sindh in 2015–16, whereas the situation was the opposite 10 years ago. Income from crops and livestock makes up on average 28.8% of total income of these households in Punjab and 35.4% in Sindh. Reliance on wages and salaries is much higher in Sindh (50.4%) than in Punjab (35.7%). The contribution of 'all other income' (which most likely includes domestic and foreign remittances) is almost double in Punjab (23.9%) compared to Sindh (12.3%), because a lot more workers from Punjab are working abroad. Remittances from overseas are an important source of income for many Pakistani households. According to the Pakistan Economic Survey 2017–18 (Government of Pakistan 2018), during 2017 a total of 261,849 workers from Punjab were working abroad (mainly in Dubai and Oman)—the highest number among all provinces, followed by 107,366 workers from Khyber Pakhtunkhwa. The other provinces do not appear to have large numbers of workers overseas.

It is also clear from the figures in Table 4.1 that sources of rural household income at the bottom end of income distribution are highly diversified, as non-agricultural income including wages and salaries, and remittances and fiscal transfers, make up a significant share

of household income. An important policy implication of this feature is that small farmers need advice, training and policy support not only on crop production or livestock, but also on other sources of income, particularly for rural non-farm small businesses. At present, extension agents are typically narrowly trained in only crops or animal husbandry. Helping small farmers in diversifying their livelihoods remains a challenge for extension agents.

Consistent with the aims of the Pakistan Vision 2025 (Planning Commission 2014), which include promoting inclusive growth and bridging yield gaps between smallholders and progressive farmers, ACIAR project ADP/2010/091 has developed policy recommendations for improving livelihoods of smallholders. The project identified the lack of extension services as a major constraint facing these smallholders, together with the lack of access to affordable formal credit, lack of access to markets and supply chains at remunerative terms, the need of smallholder farmer organisations for better bargaining power, and a need for empowerment of women in agriculture. This chapter deals with improving access to extension services.

As noted in the opening chapter of this monograph, global food consumption patterns are rapidly changing due to a combination of rising incomes and urbanisation (IFAD 2016). Demand for starchy staples and rice is giving way to higher demand for fruit, vegetables, livestock and dairy products, and fish and poultry. The new consumption patterns are also changing agricultural production patterns in the Asia-Pacific region, moving away from cereal or grain-based production towards higher value production of livestock and dairy products, poultry and fish. Thus, new opportunities are opening up for smallholders to earn higher incomes by engaging with modern food supply chains for these products.

The engagement of smallholders with modern supply chains is not likely to occur automatically, however, because up until now smallholders have had minimal engagement with agricultural markets, and have instead relied on intermediaries (middlemen, contractors and commission agents) to sell their produce. Smallholders now need to learn how to engage with modern supply chains, which prefer not only to buy in bulk to keep transaction costs lower, but also demand strict compliance with stringent sanitary and phytosanitary (SPS) food safety standards. It is highly unlikely that small farmers can lift their capabilities on their own to succeed in modern food supply chains; extension services must enable smallholders by teaching them new skills before they can succeed in the new market environment.

Extension services must educate small farmers about new technologies and farm practices that can increase productivity of animals and fruit trees, leading to higher incomes. Indeed, the fundamental purpose of agricultural extension services must be to equip farmers with basic agricultural education to improve their capabilities by adopting new technologies and farming practices. Prearranged and systematic communication with farmers is an integral feature of extension services (Farooq et al. 2010, 2005).

At the heart of the rationale for agricultural extension services lies the three-fold recognition that: (a) agricultural technologies, techniques and inputs are always evolving; (b) agricultural productivity can be increased by judicious use of these inputs and technologies; and (c) small farmers must be helped in the process of learning how to use these inputs and technologies. As Qamar (2005) warns in an FAO report: 'Cosmetic changes to the existing national extension services system will be of little benefit, as will be the repeated training of staff in stereotyped agricultural subjects. Just as well beat a dead horse.'

International experience reviewed in Section 4.3 confirms that governments in many countries have implemented policies for the modernisation of their extension services in recent years. In many cases, the mission of extension services has been broadened to

include not only new information, but also to educate and train farmers in the judicious use of modern inputs and to promote farmer self-help groups or networks for bulking up their bargaining power. Enabling small farmers to engage gainfully with modern supply chains has become the new mission of extension services. In turn, this has made extension services more demand driven, in contrast to the past practice of transferring 'knowledge' to the farmers. Additionally, extension services are also becoming more inclusive, by catering not only to large commercial farmers, but also smallholders and women in agriculture. Importantly, governments in many countries are investing additional resources in staffing and training extension service personnel, and national governments in many countries are involved in supporting the modernisation of extension systems.

4.2 Extension services in Punjab and Sindh

4.2.1 Punjab

In Pakistan, agricultural extension services have always been the responsibility of provincial governments. In 2001, the devolution of power gave greater role to district administrations in the planning and execution of development projects and associated extension services. Having tried district-based administration for a decade, however, provincial governments concluded that decentralisation of extension services had not worked well, and both Punjab and Sindh have re-centralised administration of extension services from district administrations.

Punjab is the largest province of Pakistan and accounts for 83% of the nation's cotton, 80% of wheat, 97% of fine aromatic rice, 63% of sugarcane, 95% of potato and 78% of maize. Amongst fruits, Punjab has a 66% share of the national mango production, and 95% of citrus. The Agriculture Department of the Government of Punjab has a large force of extension service personnel comprising more than 600 agriculture officers and approximately 4,000 field assistants.

The Directorate General Agriculture (Extension and Adaptive Research) works under the umbrella of the Department of Agriculture and maintains links with the district administration on agricultural extension matters. This Directorate is responsible for providing extension services in crops and horticulture subsectors. Its role includes transmitting information to growers about modern agricultural inputs, technologies and techniques; propagation of pedigree nursery plants of fruits at government nurseries for distribution to growers; connecting growers with the research wing of the provincial government; conducting surveys, and other collection of data; and helping farmers in taking remedial measures against pests and diseases.

In 2015, the Punjab Department of Agriculture implemented a new system of extension services at a total cost of Rs4,528,451 million—*Extension Services 2.0 Farmer Facilitation through Modernised Extension*—as the flagship program of the Punjab Agriculture Sector Plan 2015–2020 to transform Punjab's agriculture. The official rationale for introducing this flagship program was to overhaul the agricultural extension system to respond to burgeoning problems with respect to recent advances in agriculture. Even a dedicated dress code was introduced for extension services staff to provide them with a clear identity. In-service agriculture training institutes, the Regional Agriculture Development and Economic Centre and an adaptive research system team were given the task of improving the knowledge frontiers of the extension staff.

A project management unit was set up to facilitate coordination, monitoring, and implementation of *Extension Services 2.0*. While the primary focus of *Extension Services 2.0* is on the crop sector, its broader focus includes helping all farmers (including small farmers and women) and making economic growth more inclusive. An agricultural helpline has been established providing farmers toll-free

telephone support (0800-15000 and 0800-29000) to acquire information on their urgent and emerging issues.

There is a separate department of extension services for livestock and dairy in Punjab. The Punjab Livestock and Dairy Development Department (PLDDD) has two Directors-General: one for research and one for extension. The PLDDD released a new livestock policy in 2015 under the banner of '9211 Virtual Government System'. The focus of the new policy is on prevention of disease rather than on curing sick animals. A key feature of the new policy is an ICT-based database of livestock farmers and dairy animals in Punjab, covering 25,892 villages, 3.3 million farmers and 50.6 million animals. This database helps in monitoring animal health and planning of vaccination campaigns. The PLDDD now has a database of 10,000 milkmen in the province that is used for extending cheap milk-processing technologies to the milkmen, along with the development and maintenance of a safe cold chain. PLDDD has also developed a helpline (0800-78686) for providing livestock-related information to farmers.

4.2.2 Sindh

Agricultural extension is now under the provincial government, as it was before devolution in 2001, except at the subdivisional level.

In 2001, under the Sindh Local Government Ordinance 2001, the Agricultural Extension Service in Sindh was decentralised and placed under the District Nazim and District Coordination Officer. New posts of Execution District Officer (EDO) (Agriculture) were created at District level and six departments (i.e. Agricultural Extension, On-Farm Water Management, Forest, Livestock, Poultry, and Fisheries) were kept under the EDO. At the *Taluka* level, the supervision of agriculture officers and field assistants was assigned to the newly created deputy district officers.

The devolution experiment of 2001 did not work quite as expected and came under heavy criticism for lack of coordination among districts and between district administration and the provincial government. Accordingly, this model of administration was changed after the repeal of Sindh Local Government Ordinance 2001 and the revival of *Sindh Local Government Ordinance 1979 Act 2011* (*Sindh Act No. XXIV of 2011*). The erstwhile deputy district officers are working as assistant directors, agriculture extension in their respective *Talukas* and the post of EDOs (Agricultural Extension) at Karachi, Hyderabad, Mirpurkhas, Larkana and Sukkur were converted into the posts of divisional directors with the same budget of EDO and staff position at HQ level. The posts of EDOs of the remaining districts were converted into the posts of Additional Directors, Agriculture with the same budget provision and staff position of the EDO. Since then, agricultural extension is working under the provincial government as it did before devolution, except at the subdivisional level. Now, field assistants are posted at *Tappa* level, agriculture officers at union council level, assistant director at *Taluka* level, deputy directors at district level, directors of agricultural extension at divisional level and Director General, Agricultural Extension Sindh at provincial level.

The agricultural extension wing of the Sindh Department of Agriculture, Supply and Prices is responsible for advising and educating farmers in modern crop production practices and technologies; advising farmers on proper seed requirements, timely sowing, balanced and efficient use of fertilisers, and efficient/judicious use of irrigation water and pesticides; and educating farmers in effective crop management, harvesting, storage and marketing, etc.

4.2.3 Overall approach to extension services in Pakistan

The current extension approach in Pakistan (the agricultural hub program) is a modified version of the previous 'Travel & Visit' (T&V) approach that was adopted in the 1950s. Its methodology is to select a progressive and

socially accepted farmer (termed the hub farmer) as the model farmer whose farm serves as a demonstration centre for other farmers. Extension staff visit the hub farmer at least once a week and arrange farmer meetings to introduce and disseminate approved agricultural technologies. Other farmers are invited to the centre for learning.

Reviews by the Food and Agriculture Organization of the United Nations (FAO 2015, 2012) and IFPRI (2012) reported that extension services across Pakistan's provinces did not meet the needs of small farmers and women farmers. Reasons for this include lack of adequate funding, lack of training and career prospects of extension workers, lack of coordination among government departments, and the dominance of large farmers in Pakistan's agriculture.

Pakistan's funding of public R&D in agriculture relative to agricultural GDP, known as the R&D 'intensity ratio of agriculture', is the lowest in the South Asia region. Within this region, India has the highest ratio at 0.4, followed by Sri Lanka and Bangladesh each with 0.34, Nepal 0.27 and Pakistan 0.25 (Shahbaz and Ata 2014). Although Pakistan enjoyed high agricultural yields during the Green Revolution, agricultural yields in Pakistan have been stagnant for many years and overall agricultural growth has slowed down during the last decade.

A direct result of underfunding of extension services is that each extension agent in Pakistan is expected to serve around 6,880 farmers (IFPRI 2012), whereas the corresponding figure in India is 1,360 (B.S. Chandel pers. comm. 2017). In a background paper specially prepared for project ADP/2010/091, Shahbaz and Ata (2014) conclude that Pakistan's agricultural extension services remain focused primarily on major crops (wheat, maize, sugar cane and cotton) and on large farmers who dominate agricultural investment in Punjab and Sindh. As a result, small farmers and women farmers are generally ignored.

Major reasons for the exclusion of women farmers from extension services are that, due to cultural norms, male extension workers cannot interact with rural women, and there is a severe shortage of female extension workers in Pakistan (FAO 2015). Thus, small farmers (men and women) in Pakistan desperately need support from public extension services.

4.2.4 Decentralisation and coordination

Pakistan's experiment with district-based devolution of extension services between 2001 and 2011 failed to deliver the benefits of decentralisation, which include empowering local farmers and communities in an inclusive manner. Lack of coordination between various deliverers of extension services ultimately resulted in information overload due to duplication, or conflicting advice being provided to farmers. The lack of coordination was not limited to district administrations. According to Burton et al. (2012), agricultural universities in Pakistan also operate in relative isolation from other agricultural research and extension institutions. As a result, extension services in Pakistan never worked like a well-oiled machine in which different parts support the entire system to function smoothly. Rather, extension services remained inefficient, top-down, autocratic, large-landholder-oriented and ignoring the need for gender equality (Abbas et al. 2009).

Devolution was followed by a reduction in funding by 25–30%, and decentralisation has also weakened the morale and motivation of extension agents. Shahbaz and Ata (2014) reported that the majority of farmers did not perceive any change in the overall performance of the agriculture extension after devolution.

4.2.5 Extension services by non-government providers

The involvement of the private sector in agricultural development is relatively recent in Pakistan. This was instigated by a recommendation of the National Commission on Agriculture in 1988, encouraging the

participation of the corporate sector to facilitate transition of Pakistan's subsistence agriculture to commercial agriculture (Government of Pakistan 1988). Agricultural input suppliers—predominantly international pesticide and fertiliser enterprises—began to take part in agricultural extension services. Now, almost all the major private national and multinational companies engaged with agriculture and livestock are also providing advisory services to their clients, as these services also provide a valid channel for advertising and promoting their products.

Some studies have reported that pesticide and fertiliser dealers are highly influential in the farmers' choices regarding the use of specific pesticides, fertilisers, seeds and other related inputs, but their advice was often limited to the sale of their own products (Mirani 2007). On the other hand, other studies have reported that farmers do not have a favourable opinion of the extension staff of private companies, who are perceived as either incompetent or biased. Smallholders are reported to be either unable to afford private sector extension services or consider the quality of these services not worth paying for (Qamar 2005).

Several NGOs and farmers' organisations are also providing extension services, such as WWF-Pakistan, the Aga Khan Rural Support Program (AKRSP), the Sungi Development Foundation, the Lok-Sanjh Foundation, the NGO World, and the Sustainable Development Policy Institute (SDPI). The community participation model of AKRSP was adopted at the national level through nationwide rural support programs.

4.3 Global experience in improving extension services

4.3.1 China

The national government of China is heavily involved in the country's agricultural extension services system, which has five distinctive features. First, the training of extension staff is specialised to provide extension services for crops, livestock, fisheries, agricultural management, or farm mechanisation. Second, the public extension services aim for inclusiveness of all farmers (men and women). Third, a systematic approach is taken for identifying farmers' needs for extension services. Fourth, all extension agents are accountable to the farmers. Finally, extension agents are given incentives to improve their performance.

From a budgetary perspective, China's public sector funded extension workers fall into three categories: fully funded agents (who are on government payroll), partially funded agents (government pays part of base salary) and self-funded agents (whose base salary comes from commercial activities and grants). The county governments have flexibility in implementing these categories. In most cases, crop extension workers are categorised as fully funded agents, while livestock and aquaculture extension staff are often partially funded agents. Extension workers dealing with inputs such as seeds, fertilisers and pesticides are usually self-funded agents.

Around the turn of the century, China had more than one million trained extension staff, of which about 370,000 were trained in crops, 375,000 in livestock, 40,000 in fisheries, 175,000 in agricultural (economic) management, and about 180,000 in farm mechanisation. An additional one million farmer technicians work part-time at the village level providing advisory services to other farmers and can also earn commissions from selling fertiliser, pesticides and seeds to farmers (Huang 2001).

4.3.2 Chile

After a series of reforms in the 1980s, Chile's extension services have also become more demand driven than before. Now, farmer organisations seek extension advice for implementing specific projects for commercialisation and modernisation of small-farm agriculture. The government does not provide all extension services through the public sector, but also contracts private

extension service providers for specific services. The contracted private extension services have yielded positive results for small farmers, and there appears to be no support for returning to a public extension system. Chile's contract extension system is now characterised by the following key features:

- Demand-driven extension services are designed for different categories of farmers.
- Program design of extension services is decentralised at regional and local levels.
- Each program includes extension advice on market orientation and marketing services.
- Extension agents are provided technical support services and training.
- There are national monitoring and evaluation systems for extension services.

4.3.3 India

Extension services in India have evolved over time. Instead of being focused on the supply of improved seed varieties and fertilisers, as was the case during the Green Revolution period, extension services are now focused on providing information, knowledge, technologies and technical support for enabling farmers to participate in modern supply chains for high-value products.

Extension staff are also trained to guide farmers by 'holding their hands' through the transition from subsistence farming to commercial farming, in which much higher standards of product safety and timely delivery are required.

All three levels of government in India play a role in agricultural extension services. The central government established the Agricultural Technology Management Agency (ATMA) in 1998 as a pilot, and then mainstreamed it nationwide in 2007. Within the broad parameters of this national framework, each state is free to develop its own model of extension services, with or without private sector/NGO partnerships.

The key features of the ATMA model are basic district-level interactive administration, coordination and management of programs and projects at the state level, functional decentralisation, financial autonomy, widespread coverage of extension activities and the farming community, enhanced research–extension–farmer (R-E-F) linkages, bringing private agencies into the extension network and regular training of extension workers (for details see Chandel 2015). It is widely acknowledged that the ATMA model of extension services has been able to combine the benefits of decentralisation with a national policy of providing inclusive, demand-based and pluralistic extension services to farmers, including small and marginal farmers.

The ATMA model has contributed significantly to improving rural livelihoods in most project districts, directly or indirectly affecting about 6.7 million rural households in the 28 National Agricultural Technology Project (NATP) districts, plus an additional 8.3 million households under the Diversified Agriculture Support Project in Uttar Pradesh. According to Swanson and Rajalathi (2010), the positive impacts of ATMA include the following:

- Farmer empowerment: over 10,000 farmer groups were organised, with one-third being composed of women farmers and landless rural women. Farmer leadership and organisational skills emerged at village, block and district levels, directly influencing extension programs and priorities.
- Agricultural diversification: substantial increases in the production of high-value crops/products; for example, between 1999 and 2003 the area allocated to horticultural crops, oil seeds, herbs and medicinal crops, sericulture (silk), livestock and fisheries has increased substantially.
- Higher farm incomes: average farm income increased 24% in 28 project districts, compared with only a marginal increase in nearby, non-project districts.

4.3.4 Africa: Kenya, Rwanda, Burundi and Zambia

In Kenya, the One Acre Fund started in 2006 with 125 farmers, and has been growing at the rate of 30% each year since. It is now serving more than 135,000 small farm and landless households across Kenya, Rwanda and Burundi. The One Acre Fund provides a complete bundle of extension services to include high-quality seeds, fertilisers, credit, weekly farm education, and postharvest and market support. The approach of bundling services together provides farmers a complete value chain and adds value to the communities. Farmers are provided these services on credit, and flexible payments are agreed throughout the season. Field expenses not covered though loan repayments are covered by a broad pool of donor funding (www.OneAcreFund.org).

The Zambian Ministry of Agricultural and Cooperative Development, in cooperation with the Swedish International Development Agency, introduced a participatory extension strategy involving 44,000 rural households to increase farmers' incomes. Community groups were organised and potential economic opportunities for the farmer households were identified for each target area. After identifying opportunities for these households, training was provided to allow them to exploit the opportunities. Within five years, the participating households increased their farm income by 35% more than the non-participating households. Households with female heads increased their average income by 78% in comparison with a 31% increase among male-headed households. More than 60% of the participating households also achieved food security by producing more maize than they consumed (Swanson and Rajalathi 2010).

Given the substantial role of rural support programs in Pakistan, this model of extension services may be usefully incorporated into the work of the RSPs.

4.4 Summary

The foregoing discussion leads to the conclusion that extension services in Punjab and Sindh have attracted well-deserved criticism from domestic and overseas researchers. The extension system was largely supply driven, and focused on crops, elite farmers and male farmers, with the result that small farmers and women farmers were not well served. The extension system was also under-funded, with the result that each extension agent had to serve a huge number of farmers, so those farmers with little influence (in other words small farmers and women) were left out. The extension agents were also not well trained to enable small farmers to engage with modern food supply chains. In the dairy industry, extension agents were veterinarians who were largely focused on treating sick animals, rather than preventing animal disease.

In the past 2–3 years, new initiatives have been implemented in both provinces to modernise extension services for both agriculture, and livestock and dairy. Lack of adequate funding of extension services remains an issue, and we have made recommendations about that. Improvement of technical quality of the extension agents and improving their career paths and motivation also need to be addressed. The international experiences discussed above also point to some useful directions that are highly relevant for Pakistan. Some of these are summarised below, before putting out specific recommendations.

4.4.1 The mission of extension services needs to become broader

Instead of simply transferring technology (e.g. high-yielding seeds) and subsequently visiting the farmers, objectives of modern extension services include building trust, behavioural change, reduction of risk, and successfully connecting farmers with value chains. Thus, activities of extension services should broadly include: (a) to facilitate access of farmers to information, knowledge and technologies; (b)

to facilitate their interaction with partners in research, education, agribusiness, and other relevant institutions; and (c) to assist them to develop their own technical, organisational and management skills and practices.

4.4.2 Extension services must become more demand driven

The worldwide trend towards demand-driven extension services is the result of two fundamental insights: (a) that the needs of all farmers for extension services are not identical; and (b) that smallholders cannot afford to engage gainfully with modern supply chains without the support of extension services. Thus, extension agents must enable smallholders to become self-teaching experimenters and effective trainers of other farmers (Anderson 2007). Several countries in Asia, Africa, and Latin America have made their extension services more demand driven.

4.4.3 Extension systems must become pluralistic

Extension systems around the globe are provided not only by the public sector, but also by the private sector and civil society providers. As the coverage of extension services provided by non-government sector organisations expands, the role of the public sector is progressively becoming more regulatory and supportive, by coordinating the service providers and utilising IT-based applications.

4.4.4 In many countries, several levels of government are involved in extension services

In several countries, extension services are not provided by just one level of government; rather central, provincial and local governments are all involved in different aspects. This allows national campaigns to be launched for introducing a systemic shift in the roles of extension services, leaving room at provincial or local levels for variations to accommodate local circumstances. The involvement of national government also means that extension services can be adequately resourced.

4.5 Recommendations

RECOMMENDATION 4.1

The mission of extension services in Pakistan should be redefined more broadly to 'enable all farmers, including smallholders and women, to gainfully engage with modern food supply chains by adopting modern methods of production to increase their productivity and to diversify their livelihood sources'.

Motivation

The motivation for this recommendation is to: (a) put specific focus on smallholders and women farmers being the legitimate clients of the extension staff; (b) make extension services more demand driven than they are at present; and (c) make extension services a driver of diversification of the rural economy.

RECOMMENDATION 4.2

All policy initiatives for modernisation of extension services should be given prominence in support of the key objectives of the Pakistan Vision 2025 and the 12th Five Year Plan of the Planning Commission (2018–23) (e.g. increasing productivity, promoting rural transformation and achieving inclusive development). Federal and provincial governments should increase budgetary support for upgrading capabilities of extension personnel through in-service training in promoting rural diversification and small farmers' organisations, and recruiting more women extension agents.

Motivation

The motivation is to inject some national support and financial commitment to compensate provincial governments for national benefits from modernised extension services. While primary responsibility for extension services will remain with provincial governments, the effect of this recommendation would be to attract federal financial support for bringing about a broad-based transformation of extension services and equipping extension service personnel with technical training required for their broader responsibilities in respect of rural transformation and small farmers' organisations.

It is worth noting in this context that in India, where agriculture and extension services are also state subjects under the constitution, the central government share of actual expenditure of ATMA in 2014–15 was 84% of total public expenditure, while the states funded the remaining 16%. The central government provides its share in annual instalments. Before releasing the second instalment to the states, the Centre ensures that: (1) audited utilisation certificates and audited statements of expenditure for the previous year are available; (2) monthly and annual progress reports for the previous month and year, respectively, have been submitted; and (3) the concerned state has released the corresponding share against the funds provided by the central government up to the previous year.

RECOMMENDATION 4.3

To promote greater diversification of the rural economy, extension personnel should be trained to enable smallholders and women farmers to supplement their farm incomes with additional earnings from non-farm activities such as small businesses or off-farm employment.

Motivation

Public extension personnel need to be equipped to help small farmers increase their resilience by diversifying their income sources. Strengthening links of smallholder agriculture with the non-farm rural economy (small business opportunities) will go a long way in raising labour productivity in agriculture and increasing household incomes of smallholders at the same time.

RECOMMENDATION 4.4

The current deficit of women extension staff must be rectified as a priority by increased funding for training female extension staff.

Motivation

While women undertake heavy workloads in rearing livestock and caring for fruit trees in Pakistan, the number of female extension staff is currently extremely low. Due to cultural inhibitions and social expectations, women farmers do not like to interact with male extension staff. This recommendation aims to plug a major hole in the current system of extension services in Pakistan. Because of the shortage of women extension staff, women farmers are not able to get the required help, guidance and training.

RECOMMENDATION 4.5

Extension services should train small farmers for Global GAP certifications so that they can gain sanitary and phytosanitary (SPS) compliance and meet the strict SPS requirements of modern food supply chains for exporting Pakistan's dairy products and citrus and mangoes.

Motivation

This recommendation addresses a major challenge in Pakistan's preparation for increasing exports of food products to high-quality markets. Meeting this challenge requires a major initiative to first train the extension personnel and then the small farmers to enable them to sell their produce in high-quality markets.

RECOMMENDATION 4.6

Urgent measures should be taken to improve coordination between all agencies and government departments that are involved in providing extension services and in training extension personnel.

Motivation

There is a clear need to improve the efficiency and effectiveness of Pakistan's agricultural extension services system by streamlining coordination within, and across, relevant government agencies, research institutes and agricultural universities.

RECOMMENDATION 4.7

To make extension services more demand driven, non-negotiable extension vouchers should be issued for smallholders and women farmers to purchase extension services from private sector providers. Initially, vouchers should be issued on a trial basis as pilot projects in selected districts, and subsequently mainstreamed after appropriate modifications in light of the experience gained from the pilot trials.

Motivation

The motivation behind this recommendation is: (a) to provide choice to farmers in selecting extension service providers who best meet their needs; and (b) to help make the entire extension service system more demand driven.

RECOMMENDATION 4.8

Extension service personnel should encourage small farmers to form associations, networks or cooperatives, or producer companies to enhance their bargaining power and tap into the benefits of social capital.

Motivation

The motivation here is to involve extension service personnel in the promotion of small farmer self-help networks, possibly based on the rural support programs already operating in Pakistan.

RECOMMENDATION 4.9

An effective GIS-based monitoring and evaluation system should be introduced together with regular publication of reliable and timely statistics about the progress being made.

Motivation

The motivation here is to use information technologies in innovative ways to extend the outreach of extension services, and to strengthen monitoring and evaluation frameworks that are based on reliable and timely statistics.

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