

Demand-Driven Extension: Need for Public Extension to Turnaround



“Is it not strange that agriculture in India has transformed itself, while the public extension has lost its way? The supply-driven extension, now regarded as largely inaccessible, ineffective and irrelevant, should make way for a more dynamic ‘demand driven’ extension system”, argues Dr Arun Balamatti.

Context

Public extension indeed had a lead role during the Green Revolution (GR). Post GR, however, everything else about agriculture has changed. The nature of farming has changed from being self-reliant to externalized farming; the purpose of farming has changed from largely subsistence to market-oriented; traditional, yet confident, self-contained farmers as a community are now operating as individuals; are disillusioned and seem to have lost confidence. Public extension system that worked with the eagerness and energy to act as a springboard for farmers to adopt high yielding varieties (HYVs), hybrids, chemical fertilizers and irrigation technologies during GR is no more the same.



Farmers prefer visit of extension personnel to their fields and provide specific advice to solve the problems they face in farming

Loss of farmers' seed sovereignty, exploitative markets and new challenges like climate change seem to have unsettled the public extension system. The government's desire to double farmers' income by 2022 comes in as an added pressure on the public extension system. Improving productivity as well as profitability is the name of the game, today. Is the present public extension system prepared to live up to the challenge? It seems highly unlikely, unless the public extension system recognizes, that it has not only lost its way, but also that it must turn around and change its orientation.

Farmers Missed the Change that Everyone Else Embraced

The constant research and technology development efforts are impacting our life significantly, including the food we eat, the clothes we wear, the means of our transport, the communication we do and the gadgets like computer, television, mobile phones that we use every day. Similarly, research and technology developments have brought enormous changes in the field of agriculture, in the crops, varieties, farm machinery and the agronomic practices. Unfortunately, majority of the farmers are not able to adopt the new technologies and practices. There are many reasons why farmers are unable to access and adopt new technologies, such as: the diversity in agricultural ecosystems and in the range of crops being grown, the direct and indirect influences of biodiversity on diverse cropping systems, language and cultural heterogeneity. These reasons aside, the 'information gap' is also a major constraint, which is reflected in the lack of awareness about new and relevant technologies due to lack of a suitable, responsive and comprehensive 'agricultural extension system'. Therefore, the gap between generation of technological innovations and their 'utilization' is constantly widening.



Most of the current challenges in farming such as pest resurgence, deterioration of soil and water resources and linking farmers to markets need collective response by farmer groups and extension should support farmers to organize themselves to deal with these challenges

Agricultural extension system, traditionally, has had two main functions: imparting knowledge and developing attitude and skills, so that farmers can use the new knowledge. Agricultural extension today, known as Rural Advisory Services (RAS), has an extended scope that includes provision of information, services and skills to farmers, including recognition of multiple players involved in the process such as public, private and civil society organizations. Delivering knowledge is relatively easy in the information era that we live in, today. However, building the necessary attitude and skills among a vast majority of farm families is a difficult task. Many farm technologies are being developed, often beyond the comprehension of an average farmer. Since the end users of the technological advancements are farmers, their capacity building, although inevitable, has largely remained inadequate due to absence of effective institutional mechanisms and inadequate human resources under the present agricultural extension system. An alternative system of agriculture is imperative.

Agricultural Extension: The Current Supply-Oriented System

The system in operation in India and many developing countries is essentially a 'supply-oriented agricultural extension'. The National Agricultural Research System (NARS), headed by the Indian Council of Agriculture Research (ICAR) through its country-wide research institutions and the State Agricultural Universities (SAUs), undertakes research to develop technologies on crops, varieties, nutrients, pesticides, agronomic practices, farm implements and equipment etc. The Department of Agriculture (DoA), under the aegis of the state governments, has the mandate of transferring the technologies to farmers, along with its various development departments.

The Research and the Development agencies operate in the context of agro-climatic zones and their technology development and RAS are aimed at farmers and farming. On the other hand, private input agencies who sell seeds, fertilizers, pesticides, farm machinery, irrigation equipment and so on. While the end beneficiaries of research, extension and input trade are the same - the farmers - there seems to be little coordination between the actors involved in research, extension and input trade. In the process, farmers are left with no choice but to seek different agencies for different purposes.

Inadequacies in the supply-oriented extension system

There are certain fundamental inadequacies in the present 'supply-oriented agricultural extension system'. Extension is designed to be a public service system. While public extension is mainly the mandate of the DoA, the SAUs focus more on research and teaching and hence have limited contact with farmers through their limited extension activities. The DoA, on the other hand, working under pressure to deliver government's welfare schemes and subsidies, has reduced itself from being an 'agency of technology transfer' to a 'subsidy shop'. Various reports and studies say, that the information flow within the public sector moves linearly, with content focusing on the transfer of technology for increasing crop production.

A wider definition of agricultural extension, beyond improving crop productivity, has not been embraced. Information flow is supply-driven and not need-based or area-specific, so farmers see the quality of information provided by the public extension staff as a major shortcoming. This is due to the static and inflexible nature of the organization, where a top-down hierarchical approach continues. Access to extension is also an issue, because of the low level of outreach by public extension services. This is partly due to the public staff being overburdened with implementing state and centralized schemes, which are also not easily modified to suit local needs and conditions.

Under these circumstances, as the public agencies are moving far and away from farmers, private traders of seeds, fertilizers, pesticides and farm implements are coming closer to farmers, often through aggressive marketing strategies. It is these private traders who are now deciding what the farmers should use - the inputs, their quantity, quality and even the time of use of inputs (See Box 1).

Box 1: Farmers access to information

The latest Situation Assessment Survey of Agricultural Households in India (NSSO, 70th round), based on a countrywide survey (July 2012-June 2013) of nearly 35,000 households revealed that “farmers continue to remain far removed from new technologies and guidance from state run research institutes including KVKs (Krishi Vigyan Kendra)” (NSSO, 2014). Over 59% of the farm households received no assistance from either government or private extension services. Of the 40.6% households who received extension assistance, only 11% of the services came from the government machinery - extension agents, KVKs and agricultural universities. More farmers depended on other progressive farmers (20%), media including radio, TV, newspaper (19.6%) and private commercial agents (7.4%).

Source: NSSO (2014)

Glendenning et al. (2010) concluded from a review of agricultural extension in India, that despite the variety of agricultural extension approaches that operate in parallel and sometimes duplicate one another, the majority of farmers in India do not have access to any source of information; this lack of access severely limit their ability to increase productivity, income and reduce vulnerability.

Source: Glendenning, et al (2010)

Therefore, it is not the problem in the crops or the perceived requirements by farmers, but it is the corporate interests of private players that persuade and influence farmers’ decision. The farmers, in this ‘supply-oriented agricultural extension system’ have become hapless consumers rather than being the ‘end users of technologies’.

The Need for Demand-Driven Extension Services

Today, farming is no longer a means of subsistence but an enterprise. Farming requires not just the successful cultivation of a crop, but also demands a reasonable price for the farmer to succeed in the complex ‘marketplace’. This complexity is a challenge to farmers of all socio-economic status, be it big farmer, smallholder, literate or illiterate. Every farmer needs to put together the available knowledge, technology and financial resources in addition to other

essential inputs like seeds, fertilizers, pesticides etc. The key to success here lies in farmers acquiring quality inputs at competitive prices, putting them into use on their fields appropriately, harvesting a good crop and selling for profit. Thus, farmers are required to be skilful and shrewd managers. Unfortunately, many farmers are good at cultivation, but have limited managerial skills, especially on the market front, hence, even the best of the farmers are losing in the market.

The term 'demand' is defined as what people ask for, need and value to an extent that they are willing to invest their resources, such as time and money, in order to receive the service (Chipeta 2006). Demand-driven extension (Box 2) involves, extension clients actively identifying which advisory and educational services are needed. However, this note is not about collectives where farmers organize in to farmer producer organizations (FPOs), watershed associations (WAs), water user groups (WUGs) etc., where the collectives are in a position to assert or bargain for information, services and products based on the sheer strength of their unity. Such collectives are few and sporadic.

Box 2: Demand driven extension

Demand-driven extension / agricultural advisory services represent a break from the earlier understanding of agricultural producers as beneficiaries of services. Instead, in demand-driven extension the users' demands define the content, quality, and mode of delivery.

Its main principles are:

- services are based on user demand,
- service providers are accountable to users, particularly on content and quality,
- users have a choice of service providers.

Source: Blum, M and Chipeta, S (2016)

Demand-driven extension service in this note emphasizes the needs of those unorganized individual farmers, who, in their pursuit of farming, approach private traders seeking inputs and products. In doing so, they invest their resources, such as time and money, but are not as assertive as a collective could be. As they are alone and often ignorant, they become vulnerable to exploitation and this calls for a need to safeguard their interests.

The market, in agriculture, has two dimensions. The middlemen dominated 'produce market' is a familiar one where the farmer is a constant loser; the other less familiar dimension, is the 'input market' where the farmer must buy various inputs. Farmers constantly struggle to choose and procure the right quantity and quality of seeds, fertilizers, pesticides, and farm machinery. Only those farmers succeed who can deal with input as well as output markets. Unfortunately, overwhelming majority of the farmers does not have the knowledge, skills and capacities to cope with these challenges. While there is a wide recognition of the exploitative practices of middlemen and the poor prices for crops, the difficulties in accessing technology and proper inputs are not adequately debated. While the call for demand-driven extension has existed for several decades now, new modes of reaching out to farmers could have significant impact in India, as they might better reflect the local information needs of farmers (Gupta and Shinde, 2013).

All farmers require advice on the following aspects:

- **What to grow?** Choosing the right crop, variety and agronomic practices;
- **How to finance?** Accessing low interest loan from banks or borrow from money lenders at high rates of interest (often, this is the case with majority farmers),
- **What inputs to use?** Harnessing seeds, fertilizers, herbicides, pesticides etc., from the DoA at subsidized prices or struggle to procure them from the open market without being sure about the quality and price,
- **Where and how to sell?** Selling their produce in the market at competitive price defying the clutches of the money lenders.



Farmers often come to the KVKs with the affected plant specimens to seek advice on plant protection measures they should adopt. But very few KVKs such as ICAR- JSS-KVK, Mysore has such facility.

Often, majority of the farmers either do not approach or do not get what they need from public agencies and hence end up at private input traders. In the present system, when farmers approach the SAU, they might get good information on crops, variety and agronomic practices but they are directed to either the DoA or traders for acquiring the required inputs. When farmers do approach the DoA or a trader, they find out the inputs suggested by the SAU are either not available or are too expensive. The traders then offer alternatives to farmers as they deal in products harnessed from both public and private sources, further complicating farmers' decisions. The farmers are relieved of their dilemma eventually by the traders deciding for them and thus the farmers are deprived of making 'informed choices'.

It should be noted here that such a failure is not of the farmers but of the extension system. For every citizen to have food, nutrition and progress, farmers must succeed. When the farmers'

access and abilities are inadequate, it is the 'system' which should enable them and because the supply-oriented system is failing to meet the demands of 'market-oriented farmers and farming', there is a need to reorient the extension system in a way the system addresses farmers' needs from the market point of view. However, because farmers' welfare cannot be relegated to the 'profit oriented input traders and output buyers', it may be appropriate for a public agency to experiment with a 'social enterprise model'. Thus, to enable farmers to meet the growing challenges, there is now a need for reorienting the present supply-oriented system into 'Demand-driven rural advisory services'".

Ways Forward

In the conventional 'supply-oriented extension system', the public research institutes are developing technologies, the public extension agencies are striving for transferring such technologies and the farmers are expected to utilize new technologies. This system is being rendered ineffective due to various limitations, and hence, the private input traders are becoming decision makers for the farmers. This is affecting both 'productivity' as well as 'profitability'. Productivity gets affected by wrong choices and use of inputs and technologies whereas indiscriminate use of agro-chemicals adds to production costs while exerting pressure on the environment.

The nation is looking beyond food security to ensure nutrition security and sustainability. Without addressing the deterrents like climate challenges and growing disillusionment among farmers, these goals will remain beyond reach. This demands a turnaround in the way the public extension system operates. While continuing to work towards improving productivity, the system should address enhancing profitability by helping farmers reduce their production costs and offering them remunerative prices.

Apparently, such a system transformation can only be thought of through policy shift. More of the same hasn't been very helpful. The policy shift should look at reorienting public extension system to make it dynamic and demand-driven. Extension agencies that can offer information, services and inputs as demanded by the farmers should be designed and nurtured. A public agency like KVK, for instance, may take over the role of extending technology as well as input delivery, provided the mandates, staff structuring and other support systems of KVKs are redesigned to meet the change.

Individual farmers could benefit from a competent and trustworthy agency like KVK, should they succeed in winning the confidence of few farmers to begin with. At the same time, farmer collectives like FPOs, WAs and WUGs could make better use of KVKs by playing the intermediary role between farmers and service providers.

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