

Sociological Study of Agricultural Extension in Bihar and Jharkhand

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Abstract:

Agricultural extension is responsible for bringing an innovation in agricultural technology from the laboratory to the farmers' field. Traditionally, agricultural extension workers, especially at the village and blocks levels are engaged in the distribution of agricultural inputs like seeds and fertilizers and other related administrative work. The extension workers' role of educating the farmers in the changing technology is often relegated to the background, it is imperative to examine the contribution that agricultural extension has made to the spread of the knowledge of modern technology in farm productivity. Agriculture extension is not only imparting knowledge and securing adoption of a particular improved practice, but is also aimed at changing the outlook of the farmers to the point where he will be receptive to, and on his own initiative, continuously seek means of improving not only his farm occupation, but also home and family life in totality. Agricultural Extension in India has been state responsibility and has undergone various transformations since independence. There is now a mix of both public and private interventions. Agricultural extension must also act as messengers of farmers to communicate farmers' concerns to scientists. Are the extension people giving society the critical assessment of farmers to scientists? In the new context what should be the nature of agricultural extension and how it is different from traditional knowledge of farmers in India especially in Bihar and

Jharkhand. I would like to explore what are linkages between farmers and agricultural extension in Bihar and Jharkhand.

Key words: agriculture, innovation, technology, extension, knowledge

Agricultural extension is responsible for bringing an innovation in agricultural technology from the laboratory to the farmers' field. Traditionally, agricultural extension workers, especially at the village and blocks levels are engaged in the distribution of credit and agricultural inputs like seeds and fertilizers and other related administrative work. The extension workers' role of educating the farmers in the changing technology is often relegated to the background, it is imperative to examine the contribution that agricultural extension has made to the spread of the knowledge of modern technology in farm productivity (Maji and Haque, 1979). Agriculture extension is not only imparting knowledge and securing adoption of a particular improved practice, but is also aimed at changing the outlook of the farmers to the point where he will be receptive to, and on his own initiative, continuously seek means of improving not only his farm occupation, but also home and family life in totality. Agricultural Extension in India is a state responsibility and has undergone various transformations since independence. Extension services which impart knowledge to farmers in the application of research findings in their fields for crop production improvement are thus no longer the monopoly of government agencies. There is now a mix of both public and private interventions (Bansil, 2011, p.356).

The private extension services are primarily of two types. The first is the entirely private, which is directly involved in farming activities through consultants, agri-business, agricultural input industries, etc. The second type consists of farmer's organizations, NGO's, etc., which remain largely dependent on government subsidies/grants. Public

Extension by itself cannot meet the specific needs of various regions and different classes of farmers, particularly small/marginal farmers and livestock sector. Equipment manufacturers, inputs suppliers (such as poultry hatcheries), procurement companies like ITC etc. are also involved in extension work on a limited scale with limited focus (Bansil, 2011, p.356). Therefore, Agricultural Extension has been functioning adequately at various level in India for farmers who has been engaging in the agricultural field. The farmers have been availing various kinds of knowledge as concerned to agricultural activities at national level, district level, block or tahsil level and panchayat level by government as well as private extension services.

As in several other parts of the country, the weakest link in agriculture in Bihar too is extension. This is evident from the fact that a dismal 0.4 per cent of farmers in Bihar received information on modern technology from extension agents. This is the lowest percentage among the major Indian states. The main sources of information on technology are the input suppliers and progressive farmers. There are three main public players for agricultural technology dissemination in Bihar. These institutions are Krishi Vigyan Kendras (KVKs), government departments and the Agricultural Technology Management Agency (ATMA) (Report of the Steering Group on Vision of Agriculture Development in Bihar, Department of Agriculture, Government of Bihar, 2010, p.20).

Extension in Jharkhand:

Extension services claim paramount importance in the present day agriculture and allied activities. Farmers now need latest information not only on cropping practices, but also on support services, Govt. and bank schemes, markets, etc. The extension system needs to be geared up accordingly. Tremendous amount of extension work is necessary to build capacity and confidence

in farmers to make them accept and adapt to the market oriented production system. There is a need for shift in approach, from technology transfer to Capacity Building mode. The extension system needs to cater to the requirements of the tenant farmers, share-croppers, farmers who have small area of land, women farmers, who form the larger chunk of the farming community. Extension has been identified as one the major bottlenecks in agriculture development in the State and therefore need to be given emphasis. Therefore, it is propose to set up *Krishi Gyan avam Udyog Kendras* for sub district level. Agriculture Department, Agriculture University, ATMA, KVKs, need to organise training and Extension Programmes, for progressive Farmers, members of Farmers' Clubs and SHGs on regular basis. For capacity building of farmers, skill development programmes, exposure visits, awareness creation etc have been proposed under various sectors such as crop production animal husbandry, fisheries. The total Plan outlay under this segment is estimated at Rs. 59.98 crore (Jharkhand State Agricultural Development Plan 2008-09 to 2011-12, pp.123-124).

As Abrol (Agriculture in India, Centre for Advancement of Sustainable Agriculture) writes in his article 'Agriculture in India' "since early fifties a number of public by funded agricultural development programmes have been sponsored. These have included programmes like the National Extension Service (NES) Blocks in 1953, the Intensive Agricultural District Programme (IADP) in 1961-62, the Intensive Agricultural Area Programme (IAAP) 1964-65, the High Yielding Variety (HYV) programme 1966-67 and the Small and Marginal Farmers' Development Programmes (SMFDP) in 1969-70. Though these programmes had a perceptible impact the efforts did not get replicated over different areas and categories of farmers. In mid seventies based on pilot level project in Rajasthan Canal and Chambal command area a 'Training and Visit' (T&V) system of extension

was promoted in different states. Extension efforts of the Indian Council of Agricultural Research through its research Institutes and the State Agricultural University were largely limited to demonstration of new technologies through such programmes as National Demonstration Project, Operational Research Project, the Lab to Land Programme and the Krishi Vigyan Kendras.

Agricultural Technology Management Agency (ATMA):

In late 1990s, the Government of India and the World Bank began exploring new approaches to agricultural extension. The central institutional innovation that emerged to address the problems of the extension system was the Agricultural Technology Management Agency (ATMA) model. It was pilot tested during 1998-2005 in Bihar and eight other states (covering 65 districts) under the World Bank-funded National Agriculture Support Project (NATP) and the Diversified Agriculture Support Project (DASP) (Bansil, 2011, pp. 357-358). 588 Agricultural Technology Management Agencies (ATMAs) have been established at district level to operationalize extension reforms. With the approval of CCEA, the scheme has been modified in 2010 to provide for following activities (Annual Plan 2013-14, New Delhi):

- Provision of specialist and functionary support at different levels.
- Innovative support through 'Farmer Friend' at village level.
- Revision in ATMA Cafeteria.
- Farmers' Advisory Committees at State, District and Block levels.

Krishi Vigyan Kendras (KVK) under RAU (Rajendra Agricultural University):

In an information age, the role of appropriate information package and its dissemination assumes a portal role. It is not only important to generate information but also to see that the required information are delivered to the end users at the earliest and that too without any dissemination loss. Krishi Vigyan Kendra is a front line extension system and a lighthouse for the farming community fulfilling this need. It works upon the principles of “learning by doing and seeing is believing”.

The Directorate of Extension Education has created a network of 29 such Krishi Vigyan Kendras located in 29 districts spreading over all the three agro-climatic zones of the state of Bihar. In 2013 has witnessed a revolutionary progress in the establishment of the new KVK as 10 new KVKs were established in the districts of Lakhisarai, Jahanabad, Aurangabad, Gaya, Saran, Gopalganj, East Champaran, Sheohar, Supaul, and Kishanganj. The list of KVKs operating in different districts is as below:

Sl.No.	Name of Kendra	Location
1.	KVK, Munger	Shankarpur
2.	KVK, Banka	Vijay Nagar
3.	KVK, Saharsa	Agwanpur
4.	KVK, Begusarai	Khodawandpur
5.	KVK, Patna	Agwanpur, Barh
6.	KVK, Nalanda	Harnaut
7.	KVK, Lakhi Sarai	Halsi
8.	KVK, Jahanabad	Makhdumpur
9.	KVK, Gaya	Manpur

10.	KVK, Aurangabad	Siris
11.	KVK, Rohtas	Bikramganj
12.	KVK, Vaishali	Hariharpur
13.	KVK, Muzaffarpur	Saraiya
14.	KVK, Darbhanga	Jale
15.	KVK, Sheohar	Sheohar
16.	KVK, Araria	Araria
17.	KVK, Bhagalpur	Sabour
18.	KVK, Madhepura	Madhepura
19.	KVK, Siwan	Bhagwanpur Hat
20.	KVK, Samastipur	Birauli
21.	KVK, Purnea	Jalalgarh
22.	KVK, Shekhpura	Ariari
23.	KVK, Katihar	Katihar
24.	KVK, Kisanganj	Thakurganj
25.	KVK, Gopalganj	Sipaya
26.	KVK, Supaul	Raghopur
27.	KVK, Gaya	Manpur
28.	KVK, W. Champaran	Madhopur
29.	KVK, E. Champaran	Pipra Kothi

(Source: Rajendra Agriculture University,
<http://www.pusavarsity.org.in/krishivigyan.php>)

Farm Advisory Service by RAU:

The farm Advisory services comprises of scientists visits to villages, farmers visit to research station and replies to farmers queries through postal correspondence. The progress achieved in this regard during the year 2005-2006 is as under

Sl.No.	Activities	Number	Beneficiaries
1	Kisan Gosthi	155	10143
2	Field days	63	4272
3	Scientist visit to farmer's field	1226	7474
4	Diagnostic service	197	3242

A Kisan Call Center has been established at the University headquarters at Pusa. Farmers of the state can have access to the University experts through telephonic link. Therefore, here telephone plays also most important role in promoting agricultural extension services in Bihar. But all farmers do not avail these facilities adequately because all farmers are not aware or cannot access these facilities due to some lack of political approach as well as economic hindrances. So mainly big farmers are getting these facilities in Bihar.

Agromet Advisory Services Project (Dept. of Science & Technology, Govt. of India) has achieved success in creating awareness among the farmers about the importance of weather in agricultural decision making. Meteorological data recorded at Pusa Agromet Observatory are sent to Mausam Bhawan on regular basis. On every Tuesday and Friday medium range weather forecast from National Center for Medium Range Weather Forecasting, Noida are received and in anticipation of weather forecasts, Agromet Advisory bulletins are prepared on the recommendation from various subject matter specialists/scientists of the university (Rajendra Agricultural University, Bihar, <http://www.pusavarsity.org.in/farmadv.php>).

These advisory bulletins are then sent to the farming community through mass media and also through personal contacts for their day-to-day agricultural decision making. Feedbacks are collected from farmers for economic impact analysis and to know from them how much economic benefit

they get by following our weather forecast based agro-met advisory. Verification and reliability of forecast using actual weather observations of local agromet observatory are carried out on seasonal basis and are reported to National Centre for Medium Range Weather Forecasting, Noida. Besides, weather reports particularly during inclement weather situation are prepared to meet the needs of media and other agencies.

Roles of Agricultural Institution in Bihar and Jharkhand:

After Independence it was felt that specialisation institutions were very necessary to promote research and teaching in agriculture and its allied fields. These institutions were expected to act as catalyst for change on farm front. In order to achieve this objective, it was decided to establish agricultural universities on the land grant pattern obtaining in the U.S.A. The first such University was established at Patntnagar in Tarai area of Nainital district of U.P. The U.P. Agricultural University, now known as G.B. Pant University of Agriculture and Technology is the only University in the country whose area of operation covers diverse agro-climatic regions-hills, plains and Tarai (Singh, 1987, p.357). Agricultural university is considered as one of most important part of agriculture development in India. Agricultural progress depends upon adoption of scientific and technological agricultural innovation such as use of hybrid crops and new machines for cultivating and harvesting the field.

Bihar is also covered by the large national research network with the Indian Council of Agriculture Research (ICAR) as the apex organization. ICAR has seven research centres/stations to address the specific need of Bihar's agriculture. There is, however, very little synergy between the Agriculture University and the ICAR institutions and Bihar has not been able to take full advantage of the various schemes

offered by ICAR (Towards Accelerated Agricultural Development in Bihar, Report of the Steering Group on Vision of Agriculture Development in Bihar, Department of Agriculture, Government of Bihar,2010,p.20).

The Rajendra Agricultural University is one of the 26 agricultural universities of the country which since its inception 1971, has been running the research, teaching and extension programmes through its three main campuses at Sabour (Bhagalpur),Patna and Dholi-Pusa (Muzaffarpur-Samastipur) with a number of Regional Stations, Sub-stations and Centres located in nine divisions of the State. In 1981,a separate Agricultural University was established at Ranchi to attend the problems of Chhotanagpur and Santhal Pargana areas(Trivedi,1987,p.379).That university is known as Birsa Agricultural University, Kanke. These University has been playing vital role in development of agricultural fields across the Bihar and Jharkhand and farmers have been availing various kinds of training and extension programmes through these universites, colleges, Research Centres, Sub-stations and centres and extensions in Bihar and Jharkhand. These institutions organise and conduct on-campus and off-campus training programmes for different functionaries and clients group in order to develop human resource capability in agricultural and rural development.

In the new millennium, the challenges met by the present day farmers are quite different from those met by their predecessors. The enormous pressure upon the framers, especially small and marginal one to grow more food on less land has made them information hungry. Now days, a sound knowledge base is as critical input in agriculture for them as are the other inputs such as seed, fertilizer and water. Under such circumstance, the role of extension education assumes a new significance. The Rajendra Agricultural University through Directorate of Extension Education is effectively playing this role. This Directorate was established in the year

1977 as a statutory wing of the University. Prior to this, the extension activities were controlled by the State Government. The objective behind creation of this Directorate was to establish a close linkage between the technology generation and technology dissemination units and establish linkages between State Department of Agriculture, University, ICAR and other Institutes (Rajendra Agricultural University, Pusa).

Agricultural scientists are not working satisfactory level in village level because they do not want to go and check the fertile capacity of cropping land in village level. There should be proper channel for monitoring and examining of pH level of land so that farmer should have knowledge which crop is beneficial on the basis of pH level in land and so that the productivity of crop would be high. The main purpose of farmers is to get more production in their field. The feedback system must be present in among scientists. Because farmers have more grievances towards the agricultural seeds, land fertile capacity, pH and availability of bio-fertilisers as well as chemical fertilizers. There is lack of coordination between farmers and agricultural scientists in Bihar and Jharkhand. There are lot of risks in agricultural fields for the farmers. These risks can be succumbed by agricultural scientists by applying various scientific methods of protection and management from pest, weed, and rodents.

Conclusion:

Agricultural extension facilities are not adequate in Bihar and Jharkhand. The farmers of Bihar and Jharkhand have been facing many problems during the cultivation of crops. Krishi Vigyan Kendra are situated near to district head quarters or near to block which are very far away from remote villages so farmers do not reach for access any kinds of extension facilities from these Krishi Vigyan kendra. There is also lack of proper information regarding to new arrived agricultural equipment or

new seeds or some other new agricultural scientific methods. Still the farmers of Bihar and Jharkhand practice traditionally due to lack of scientific methods of farming. The government has been trying to overcome these problems by the assistance of agricultural innovation but the schemes and planning are not implementing and are not reaching to every farmer. The dominant group of farmers are getting full privileges of agricultural extension in Bihar as well as Jharkhand. There is lack of proper monitoring and regulating of agricultural extension facilities in Bihar and Jharkhand. Sometime Kisan Mela (Farmers fair) is organised with collaboration of state government and other private agencies or agricultural institutes in which there are many representative farmers take participate. Small farmers or poor farmers are deprived to take participate in this fair. Therefore, there is no equal facilities are provided to all farmers in Bihar and Jharkhand. There is also no proper farm advisory services in Bihar and Jharkhand. Kisan Mitra are recruited at panchayat level in Bihar but this is not working satisfactory level in villages because the main motto of Kisan Mitra is dissemination of new information and knowledge to all farmers in villages. The government provides hybrid seeds, bio-chemical fertilizers and chemical fertilizers on the subsidy rate but the only few dominant farmers get benefit from these schemes through Kisan Mitra in Bihar.

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