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Knowledge of Farmers about Privatization of Agricultural Extension Services and the factors influencing it

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ABSTRACT

The present study was carried out in five districts of Haryana during 2011-12. All the 200 farmers selected for the study had heard about privatization of agricultural extension services(PAES), gathered information regarding PAES, knew name and location of PAES and utilized PAES for agricultural purposes. They also knew that PAES provided different kinds of inputs like HYV, seedlings, fertilizers, crop protection, spray pumps, infrastructure facilities and value addition to crop produce. More than three-fourth (82.50%) of farmers had high level of knowledge towards PAES. Extension contact (0.198) and education (0.179) were highly significant and positively associated with the knowledge of farmers towards privatization of agricultural extension services. While other important variables like age, family type, occupation, land holding, cropping intensity, irrigation facilities, social participation, socio-economic status, mass media participation,economic motivation, risk preferenceand scientific orientation were positively associated but found non significant.

Keywords: Knowledge, privatization, extension services, correlation, variable

Agricultural extension is an important force in bringing agricultural change and development. Structural and functional change in agricultural extension service is unavoidable to meet the needs and challenges of 21st century. In India, public agricultural extension was one of the successful strategies to overcome food crisis since 1960s. But in recent past, public extension generally disappointing for not doing enough and less cost- effectiveness and in the era of globalization and liberalization, it has made us to search the effective alternative approaches for public extension. Correspondingly, later part of 1990s witnessed emergence of private sector extension providers such as; agricultural consultancies, agri- business firms, mass media and NGOs. To address the needs and challenges of farmers in this globalization and liberalization era, there is a need for change over from traditional and subsistence agriculture to commercial and sustainable agriculture. Specifically competitiveness at the global level needs multiplying technological information inflow. In this context, extension experts have suggested that extension should be 'demand driven' and it should reduce the financial burden on government in the budget required for alternate extension that has come in vogue as private extension services to meet the needs and challenges of future generation. Estimates indicate that about 30 per cent of the available technologies are transferred to the farmers. This huge knowledge- practice gap is mainly attributed to the lack of location specific technologies (Hansra and Adhiguru, 1998) and non- accountability of public extension personnel. Further, extension worker and farmers ratio is very wide in India. i.e. 1:1000. The ratio further widens due to 25 per cent of extension personnel being

administrators/supervisors, who are not directly in touch with farmers and 50 per cent of the time of remaining extension personnel goes for office work (Shekara, 2001). In order to realize agricultural potential and to increase agricultural yields, India's extension system has experienced major conceptual, structural, and institutional changes since the late 1990s (Katharina, 2008). As a result, extension system have had to make changes by restating the system's mission, developing new vision for future and formulating plans for necessary transition to achieve the desired change.

In the light of above present study was conducted to assess the knowledge of the farmers (the ultimate user) regarding the different services of privatization and correlation of it with different socio- personal, socio- economic and socio-psychological variables.

Methodology

The present study was conducted in Haryana state. Five districts viz. Ambala, Kurukshetra, Karnal , Hisar and Fatehabad were selected. From each district, two blocks were selected randomly. These were Saha and Brara blocks from Ambala district, Shahbad and Pehowa block from Kurukshetra district, Indri and Nilokheri blocks from Karnal district, Hisar I and Hisar II blocks from Hisar district and Tohana and Bhattu Kalan blocks from Fatehabad district. Further from every block two villages were selected randomly. The villages selected were Allahpur and Saha from Saha block, Mullana and Holi from Barara block, Mohindinpur and Bhukkar Majra from Shahbad block, Khiderpura and Behimajra from Pehowa block, Biana and Badarpur from Indri block, Padwala and Anjanthali from Nilokhedi block, Dabra and Ganwa from Hisar I block, Kirtan and Dhiranwas from Hisar II block, Akkanwali and Jamalpur Shekhion from Tohana block and Khabra Kalan and Dhabi Kalan from Bhattu Kalan block, respectively. Then from every village 10 farmers who were aware of the privatization of extension services were selected. Thus, a total of 200 farmers were interviewed.

In the present study, knowledge was operationalised as the retained information possessed by the farmers towards the privatization of the agriculture extension services (PAES). To measure the knowledge of farmers, a knowledge schedule was prepared consisting of 37 items or statements. After discussing with district extension specialists, scientists, private extension agents and farmers questions were made on different aspects like general services, information provided, consultancy and diagnosis, input supply, infrastructure and technical services. Each aspect was assessed based on responses received from the farmers by putting tick mark 'yes' or 'no' against each aspect. These responses were quantified by giving 1 score for known item and 0 to not known item. The scores so obtained under various aspects/ practices were summed up both respondent-wise and as well as component-wise and was calculated for further use to draw the correlation coefficient with socio- personal, socio economic and psychological characteristics of farmers.

The respondents were divided into low, medium and high knowledge level categories on the basis of their knowledge score obtained by equidistance method.

Category	Score
Low	Up to 12
Medium	13- 25
High	26- 37

Results and Discussion

Table 1 presents the knowledge of farmers towards general service, information, consultancy and diagnosis services, input supply, infrastructure facilities and technical services of PAES.

In case of general aspects of PAES, Table 1 reveals that all the farmers had 'heard about privatization of agricultural extension services'. Similarly, all of them had 'gathered information regarding PAES', 'known private agency by name' and 'its location' and had 'utilized private extension services for agricultural purposes' followed by 81.50 and 79.50 per cent of farmers who had knowledge about 'main objectives' of private extension services and about either it is 'registered or non registered agency', respectively. Further it shows that 90.00 per cent of farmers had knowledge about 'PAES give information on newly released and suitable varieties for the area' and 'PAES provide up to date information to farmers'. Huge percentage of farmers (89.00 %) had knowledge regarding 'PAES access the electronic information and serve as data bank' and 'PAES provide information on prices of different commodities in different markets'. While

Table 1. Knowledge of farmers towards different aspects/service of privatization of agricultural extension services (PAES)

n= 200

S. No	Aspect/ Service	F	%
A. General service of PAES			
1.	Have you heard about privatization of agricultural extension services?	200	100
2.	Have you ever gathered information regarding PAES?	200	100
3.	Do you know any private extension agency by name?	200	100
4.	Do you know the location of PAES?	200	100
5.	Do you know either it is registered or non-registered agency?	159	79.50
6.	Have you ever utilized private extension services for agricultural purposes?	200	100
7.	Do you know about the main objectives of private extension services?	163	81.50
B. Information provided by PAES			
1.	Do you know PAES give information on newly released and suitable varieties for the area?	180	90.00
2.	Do you know PAES give information on different aspects of cultivation of crops including soil management, water management, weed management, storage, pest and disease management?	143	71.50
3.	Do you know PAES provide up to date information to farmers?	180	90.00
4.	Do you know PAES access the electronic information and serve as data bank?	178	89.00
5.	Do you know PAES provide information on various kinds of incentives in farming?	148	74.00
6.	Do you know PAES provide information on credit, sources and formalities?	138	69.00
7.	Do you know PAES provide information on prices of different commodities in different markets?	174	87.00
C. Consultancy and diagnosis services of PAES			
1.	Do you know PAES provide solution to specific problems?	133	66.50
2.	Do you know PAES provide demand driven extension services?	120	60.00
3.	Do you know PAES give consultancy on prevention and cure of pest and disease?	100	50.00
4.	Do you know PAES give advice on weed management?	93	46.50
5.	Do you know PAES give advice on quality of the soil, water, fertilizers, seeds, etc.	87	43.50
6.	Do you know PAES agencies have expertise for the diagnosis of various kinds of pests and diseases?	100	50.00
D. Input supply by PAES			
1.	Do you know PAES provide high yielding varieties and seeds of different crops?	200	100
2.	Do you know PAES give seedling of plantation crops?	200	100
3.	Do you know PAES provide fertilizers to farmers?	200	100
4.	Do you know PAES provide insecticide/pesticide/weedicide?	200	100
5.	Do you know PAES provide latest agricultural tools and implements?	200	100
6.	Do you know PAES provide different kinds of spray pumps to farmers?	200	100
E. Infrastructure of PAES			
1.	Do you know PAES has store house facilities for keeping the farmer's produce safe?	200	100
2.	Do you know some of PAES agencies have cold storage facilities?	200	100
3.	Do you know many PAES agencies also have its own packing and processing units?	200	100
4.	Do you know PAES agencies have transportation facilities?	200	100
5.	Do you know PAES agencies have their own laboratory for testing technology?	200	100
F) Technical services of PAES			
1.	Do you know PAES provide soil and water testing facilities?	146	73.00

2.	Do you know PAES forecast the pest and disease problems?	171	85.50
3.	Do you know PAES give machineries on rent and repair?	200	100
4.	Do you know PAES give information on soil health (structure and fertility management, enhancement, etc.)?	189	94.50
5.	Do you know PAES provide value addition to crop produce?	200	100
6.	Do you know PAES also provide information on bio fertilizers/bio pesticide livestock management, etc.?	200	100

74.00 per cent had knowledge about 'PAES provide information on various kinds of incentives in farming', about 72.00 per cent farmers had knowledge about 'PAES give information on different aspects of cultivation of crops including soil management, water management, weed management, storage, pest and disease management' followed by 69.00 per cent farmers who had knowledge on 'PAES provide information on prices of different commodities in different markets'.

Data in Table 1 also reveal about the consultancy and diagnosis services of PAES that two-third (66.50%) of farmers had knowledge that PAES provide solution to specific problems followed by 60 per cent that had knowledge on PAES provide demand driven extension services. Equally half percentage of farmers had knowledge that PAES give consultancy on prevention and cure of pest and disease, and PAES agencies have expertise for the diagnosis of various kinds of pests and diseases. While 46.50 per cent of farmers had knowledge PAES give advice on weed management followed by 43.50 per cent farmers knowledge on PAES give advice on quality of the soil, water, fertilizers, seeds, etc. While taking the knowledge about the input supply aspect and infrastructure facilities, it is interesting that all the farmers had good knowledge about the different input supply by PAES. All the selected farmers had knowledge regarding PAES provide high yielding varieties and seeds of different crops, seedling of plantation crops, fertilizers to farmers, insecticide/pesticide/weedicide, latest agricultural tools and implements, and different kind of spray pumps to farmers.Likewise all the 200 farmers had knowledge about infrastructure facilities of PAES, private extension agencies have store house facilities for keeping the farmer's produce safe, cold storage facilities, own packing and processing unit, transportation facilities, and laboratory for testing technology.

Concerning the technical services of PAES, data presented in Table 2 show that all the farmers had knowledge that PAES provide value addition to crop produce, machineries on rent and repair and 'information on bio fertilizers/bio pesticide livestock management'. While majority of farmers (94.50%) had knowledge that PAES give information on soil health (structure and fertility management, enhancement) followed by 85.50 per cent of farmers that had knowledge PAES forecast the pest and disease problems' and 73.00 per cent of farmers PAES provide soil and water testing facilities. It could be justified by the fact that knowledge lead to adoption and farmers were having highest knowledge regarding those services which they utilized to get benefitted. This can be supported by the resultsof Kumar and Singh (2001) who found out in their study on knowledge level of respondents about minikit demonstration program sponsored by IFFCO that the beneficiaries had high knowledge as compared to non-beneficiaries and Bhati (1995) who reported that majority of rural people had high knowledge about all the activities conducted by Tilona (NGO) in panchayat samiti Silora, District Ajmer (Rajasthan). It is due to the fact that the farmers who were benefitted by the NGO, had more knowledge about their activities.

Table 2 indicated that respondents had hundred percent mean knowledge regarding the services like information provided and technical services followed general services (94.43%), consultancy and diagnosis services (92.16%) and input supply(81.42%). While knowledge regarding infrastructure facilities was 52.66%.

Table 2. Knowledge level of farmers on based major aspects of privatization of agricultural extension services

n= 200

Sr. No	Aspect/ Service	Maximum possible score	Mean knowledge score obtained	Mean knowledge score in percentage	Mean knowledge gap in percentage
1	General service	7	6.61	94.43	5.57
2	Input supply	7	5.70	81.42	18.58
3	Infrastructure	6	3.16	52.66	47.34
4	Information provided	6	6.00	100	0
5	Technical services	5	6.00	100	0
6	Consultancy and diagnosis	6	5.53	92.16	7.84
	Overall	37	33	89.19	10.51

This means that farmers possessed good knowledge about those services which they actually used for agricultural purposes.

Table 3. Overall knowledge of farmers towards privatization of agricultural extension services

n = 200

Sr. No	Category	Knowledge score	Frequency	Percentage
1.	Low	Up to 12	00	00.00
2.	Medium	13- 25	35	17.50
3.	High	26- 37	165	82.50

Table 3 reveals the classification of farmers into three different categories :-low, medium and high on the basis of their knowledge scores.

The data presented in Table 3 highlighted that none of the farmers had low knowledge towards privatization of agricultural extension services, while 17.50 per cent farmers had medium level of knowledge. More than three-fourth (82.50%) of farmers had high level of knowledge towards privatization of agricultural extension services. It indicates that maximum per centages of the farmers were having high knowledge towards privatization of agricultural extension services.Similar results were found by Bawa *et al*. (2009) that 82.00 per cent respondents claimed that they were aware of privatization and commercialization of agricultural extension services, confirming the high level of awareness.

Table 4 indicate that extension contact and education were found highly significant and positively associated with knowledge of farmers. It means that these variables have contributed in formulating positive knowledge of farmers towards privatization of extension services. It implies that knowledge level of farmers' increases with the increase in their education and extension contact.

Table 4. Correlation between socio-personal, socio-economic and socio-psychological variables andknowledge of farmers towards privatization of agricultural extension services n=200

Sr. No	Variables	Correlation coefficient 'r'
1.	Age	0.137
2.	Education	0.179*
3.	Family type	0.049
4.	Occupation	0.104
5.	Land holding	0.124
6.	Cropping intensity	0.111
7.	Irrigation facilities	0.125
8.	Social participation	0.105
9.	Socio-economic status	0.125
10.	Extension contact	0.198**
11.	Mass media participation	0.117
12.	Economic motivation	0.171
13.	Risk preference	0.133
14.	Scientific orientation	0.126

*Significant at 5% level of probability.
** Significant at 1% level of probability.

It is a known fact that formal education widens the horizons of an individual. In addition, the possible reason for significant association might be that literate people are more receptive and always in search for new information and technologies, which help them to improve their socio-economic conditions. Further, the understanding of the information learnt from the different sources will be enhanced through education. Repeated interaction of farmers with extension personnel of the private agency acts as a strong motivating factor. Regular contact of farmers with private extension personnel helps them to gather more information to increase the production. These results are in consonance with the observations of Sharma (2006).

The other variables like age, family type, occupation, land holding, cropping intensity, irrigation facilities, social participation, socio-economic status, mass media participation, economic motivation, risk preference and scientific orientation play positive and non significant role as far as knowledge level of farmers is concerned. But might be some other variables which have not been incorporated in the present study had more effect on knowledge.

Conclusion

As the study showed that farmers had high knowledge regarding services provided by private extension agencies which means that present farming community has desire and keen interest to seek all those approaches by which they could be benefitted. Private extension agencies must work to make Indian farming diversified and competitive at global level. In this era of globalization farmers should get acquainted with latest information and new technologies in the field by the use of ICTs and some more effective communication methods.Much of the research has not been conducted on knowledge of farmers towards privatization so this was a maiden and novel investigation in Haryana state, which tries to analyze the knowledge of farmers on some important aspect like registration of the agency besides the services provided by them. Knowledge leads to adoption and the study showed that farmers had really great knowledge about the services which they have been utilizing in their fields.

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