

Farmers Willingness to Pay for Public Agricultural Extension Services in Tripura State of North-East India

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Abstract

The study was conducted to know the farmers willingness to pay for public agricultural extension services. All the four districts of India's state Tripurawas selected for the study and 80 farmers were selected randomly from two villages of eachdistrict. The results of the study revealed that 100 percent of the respondents were willing to pay for getting extension services. The average amount farmers were willing to pay was ₹ 34.42; whereas, the willingness to pay was according to the farm size of the farmers, farmers having more land were willing to pay more than the farmers having less cultivated area. All the farmers wanted to pay for plant protection information (100 %), followed by majority of the farmers were willing to pay for marketing information (93.33 %), credit services (86.67 %) etc. From the findings of the study of the it was recommended to introduce fee based extension services on selected topics/aea based on the preferences of the farmers to provide need based and quick services to the farmers'.

Keywords: Willingness to pay, agriculture, extension services, information need, farmers, Tripura, India.

Despite its past achievements, Indian agriculture continues to face serious challenges because of the ever-increasing population, declining land and water availability and degradation of natural resources. Extension has been traditionally funded, managed and delivered by the public sector all over the world (Sulaiman and Van denBan, 2003). However, the situation started changing since late 80s, making clients pay at least a part of the cost of providing services became a part of the government thinking. No other organization other than the State Department of Agriculture (DoA) has the overall capacity to play this role in the Indian context. Moreover, it is impossible for the majority of small farmers in the country to contact a number of organizations to obtain information (Sulaiman and Vandenberg, 2003). Almost all the services provided by public extension system have been traditionally free of cost except soil testing, input cost of field demonstration, *etc.* Farmers are ready to pay for knowing cost

effectivetechnologies which have sustainability and also relative advantages but farmers believe more in concept of 'use now and pay later', because of poor economic conditions (Singh *et al.*, 2011). In a study conducted by Sulaiman and Sadamate (2000) found that about 48% of the farmers expressed willingness to pay for agricultural information. Though roughly 50% of the sample farmers were willing to pay for quality services, it should be borne in mind that pay-worthy services are generally absent in India as in most of the rain-fed and far-flung areas, DoA has difficulties in maintaining a minimum numbers of field staff for routine activities (Sulaiman and Vanden Ban, 2003).The increasing dissatisfaction with the available sources of free information services has been forcing farmers to look for information even on payment basis. In the response of the growing demand from the farmers' side, individuals and especially private organizations have come forward to provide services on fee basis. Public organizations also providing some of their services on fee basis.In near future, the survival of public extension organization mainly depends on the financial sustainability and cost recovery mechanism of the organization.

Review of Literature

Singh *et al.*, (2011) in central Uttar Pradesh state of India stated that 76 % of the farmers were ready to pay for advice on plant protection measures followed by 63 % farmers were willing to pay for advice on weed management and 60 % were agree to pay for animal husbandry management. Saravanan and Veerabhadraiah (2003) in Karnataka reported that 36.67 % of the clientele of Farmers Communication Centres were willing to pay for the services provided by the public organization, whereas the pay range was ₹ 50-300 for public organization. The main topics farmers want to pay wererecultivation practices of fruit crops, marketing information and post-harvest technology *etc.* In a study conducted among 720 farmers from three states of India, Sulaiman and Sadamate (2000) found that about 48 % of farmers expressed willingness to pay for agricultural information.

Makdisi Fadi and Marggeaf Rainer (2011) in Germany stated that nearly 82.3 % of the respondents were willing to pay for certified farm animal product (FAW) while the rest (17.7 %) objected paying more. Ozor *et al.*, (2011) in Nigeria revealed that a vast majority (95.1 %) of farmers was willing to pay for an improved extension service, whereas only 4.9 % indicated their unwillingness to pay. Ulimwengu and Sanyal (2011) reported that in Uganda 47.1 % the farmers were willing to pay for soil fertility management, 45.9 % were willing to pay for improved produce quality/ varieties, 43.3 % were willing to pay for disease control and 43.2 % for crop protection. Budak *et al.*, (2010) in Turkey concluded that 52.5 % of the livestock producers were willing to pay for agricultural extension service. Francis *et al.*, (2010) indicated that in Uganda 35 % out of 5363 farmers and 40 % out of 3318 farmers were willing to pay for extension services related to crop and animal husbandry, respectively. The willingness to pay for extension services was slightly higher among animal husbandry farmers than the crop husbandry farmers. Ali *et al.*, (2008) in Iran reported that only 24.7 % of the farmers were willing to pay for wheat consultant engineers, whereas 75.3 % of the farmers were not willing to pay. Oladele (2008) in Nigeria reported that the prominent services indicated to be paid for are providing information to women farmers (34 %), identifying rural problems (38 %), training VEA (33 %), supervising women activities (43 %), arrange input supply (36 %), processing loans (32 %), organizing group meetings (38 %), giving advice on agricultural problems (33 %), teaching home management children and nutrition (29 %), cost of organizing farmers' seminars, group discussions (26 %) and liaison with farm

machinery (34 %). Foti *et al.* (2007) in Zimbabwe stated that only 4.6 % of the farmers were willing to pay for extension services, whereas 95.4 % of the farmers were not willing to pay for extension. All the above review stated that majority of the farmers were willing to pay for agricultural extension services for getting better services.

Study Background and Objective

Almost all the services provided by public extension system have been traditionally free of cost except soil testing, input cost of field demonstration *etc.* (Singh *et al.*, 2011). Due to globalization and liberalization, private sector firms have increased their investment in agricultural research and development. Consequently new technological inputs (seeds, chemicals, and equipments) have increasingly become “Private” rather “Public” goods (Anonymous, 1991). The increasing cost of providing services and unwillingness of government to fully support the line departments of various extension services, wide ratio between extension worker and farmers, inadequate infrastructure and financial burden on government are major factor initiating private to play major role (Dinar, 1996; Vanden Ban and Hawkins, 1996). The gap is widening day by day between demand and supply of extension services like input delivery, advisory, diagnostic, infrastructural and technological. In the interest of farmers, this gap has to be filled up by private extension and already filled to some extent (P. Chandra Shekara, 2001). These private extension agencies are providing various agricultural extension services on fees or free basis. Free of cost agricultural extension services are mostly provided by NGOs, farmer organizations, farmers co-operative (Singh *et al.*, 2011) and public organization *etc.* Farmers are ready to pay for knowing cost effective technologies which have sustainability and also relative advantage (Singh *et al.*, 2011). Charging for the services will ensure that the service is reaching those groups that are interested in information and would put it into practice. Mitei (1998) noted that when farmers pay for the service, the attendance and implementation rates are greater than 70 %. Keeping in view the changing information needs, demand for quality services, a research study was conducted to know the farmers willingness to pay for the public agricultural extension services. The Department of Agriculture (DoA) is the main public agricultural extension service provider and hence study was conducted among the clientele of the DoA.

Methodology: Tripura state of North-East India’s agricultural development (food grain production) is not satisfactory because of not becoming self-sufficient in food grain production, production 6.52 million tonnes and deficit 1.7 million tonnes (Indian Council of Agricultural Research {ICAR} Research Complex for North–East Hill Region, Umiam, Meghalaya, 2011) and as the Department of Agriculture (DoA) is the prime public organization doing maximum extension work because of larger area coverage and more number of extension personnel, it was selected for the study. Further, no comprehensive research study was conducted so far covering DoA.

Locale of the study: The research study was conducted in all the four districts of Tripura *i.e.* West Tripura district, South Tripura district, North Tripura district and Dhalai district during 2012.

Brief description of Tripura: Tripura is the remotest state in North-East region having a total area of 10,492 Sq. Km. and International Border with Bangladesh is 856 km. The 60 % of the area is hilly terrain, 60 % forest, 52.76 % forest cover, 39 % reserve forest and 25 % net shown area. The average land holding is 0.58 hectare. Temperature varies between 10 to 35 degree Celsius and average annual rainfall is 2100 mm. Total population of Tripura was 3.67 million (2011 census). The main crops

cultivated are rice, wheat, sugarcane, cotton, jute, mesta, pulses, oil seed, potato, maize and other fruit crops like mango, pineapple, orange, jackfruit, coconut and summer and winter vegetables (<http://www.agritripura.in/Agriculture/Pages/agri.htm>).

The economy of Tripura is primarily agrarian. The Agriculture sector contributes about 51% of total employment in the state and about 28% of the State Domestic Product (SDP). About 70% of the total population of the state is directly and indirectly, dependent on Agriculture. Nevertheless, the rapid growth of population and limited irrigation facilities has made the state still a food deficit state (<http://www.agritripura.in/Agriculture>).

Selection of villages and respondents: Two villages, one nearest to the Office of Deputy Director of Agriculture (DDA Office) and another farthest from the DDA office were selected from each district. In general, it is assumed that the clientele who are near to the office area will get more services and the clientele who are far from office will get less extension services as it is very easy for extension personnel to visit nearby area. Hence, to reduce this biasness clientele were selected from two different places.

Based on the random sampling methods, the farmers who have direct contact with the public extension service organization and also getting extension services were selected randomly. The clientele of the DoA have been included in the study as shown in Table 1 below.

Table 1: Selection of sample from the four districts of Tripura State, India

Districts	Villages	Sample size
1. West Tripura District	A. Barjala (Near to DDA office)	10
	B. Banbazar (Far from DDA office)	10
2. South Tripura District	A. Gakulpur (Near to DDA office)	10
	B. Gargipur (Far from DDA office)	10
3. North Tripura District	A. Ragna (Near to DDA office)	10
	B. Bhandarima (Far from DDA office)	10
4. Dhalai Tripura District	A. Lalchari (Near to DDA office)	10
	B. Potacherra (Far from DDA office)	10
Total		80

DDA office - Office of the Deputy Director of Agriculture (District Head Office)

Variables and their Measurement Techniques

The dependent variable selected for the study was willingness to pay and the independent variables selected for the study was education level, farming experience, annual income, farm size, irrigation intensity, cropping intensity, innovation proneness, extension service commitment and problems in receiving extension services.

Dependent Variable

Willingness to pay for extension services

It is the degree of desirability of farmers to pay for extension service. It is expressed in terms of rupees per year (Saravanan, 2003).

Results have been expressed in term of frequency and percentage followed by pay range and average willingness to pay of the respondents. The willingness of the clientele to pay for the different types of messages also expressed in index and was ranked accordingly.

Independent Variables

A large number of variables have been identified based on review of literature and discussion with academicians and extension scientists. The identified variables were presented before the Research Advisory Committee and faculty members and based on the discussion with them, addition, deletion and modification of variables was done with critical review.

1. Educational level: Educational level refers to the formal educational qualification of the respondents. The respondents were categorized into three groups based on their educational level, such as low- up to primary school, medium- 6th to 12th standard and high- diploma or degree.
2. Farming experience: It refers to the total number of years of experience in doing agriculture by the respondents at the time of investigation. The respondents were categorized in to three categories based on mean and standard deviation as measures of check. One score per one year of farming experience was given. The farmers' were divided in to three groups, Low $< \text{Mean} - \frac{1}{2} \text{SD}$, Medium = $\text{Mean} \pm \frac{1}{2} \text{SD}$ and High $> \text{Mean} + \frac{1}{2} \text{SD}$.
3. Annual income: It refers to the total income earned by the respondent from both the agriculture and other enterprises during the previous year of investigation. Based on the total annual income, respondents were categorized into three groups according to the caregorization suggested by the National Council of Applied Economic Research (NCAER, 2001). There were three groups like Lower class income $< 33,750$, Middle class income $33,751$ to $1, 44,000$ and High class income $> 1, 44,000$.
4. Farm size: It refers to the number of acres of dry land owned by the respondent. The farm size of the respondent was arrived at by converting the dry land and wetland into dry land acres. It was considered that one acre of wetland is equal to two and half acres of dry land. A weightage of one was given to each acre of dry land to get farm size score of the respondents. Based on the farm size the respondents were divided in to the following categories using the criteria suggested by the Department of Agriculture (DoA), Government of Tripura (2011). The farmers were divided in to Marginal farmers- Up to 2.50 ac of dry lands, Small farmers- 2.51 to 5 ac of dry lands, Semi medium farmers- 5.1 to 10 ac of dry lands, Medium farmers- 10.1 to 25 ac of dry lands and Large farmers- 25.01 ac and above of dry lands.
5. Irrigation intensity: It refers to the degree to which an individual puts his land under irrigation for cultivation of crops. It is the fraction of total area irrigated and expressed as the proportion of total annual irrigated-cropped area to the size of operational holdings and expressed in percentage.

Irrigation intensity empirically measured by computing irrigation intensity index based on formula suggested by Sinha and Kolte (1974)

$$\text{Irrigation intensity index} = \frac{\text{Gross (total) irrigated area in one year}}{\text{Size of the holding}} \times 100$$

Further, the respondents were categorized into three categories taking mean and standard deviation as measures of check such as Low < Mean - ½ SD, Medium = Mean ± ½ SD and High > Mean + ½ SD.

6. Cropping intensity: It refers to the degree to which an individual puts his land to use by cultivating crops. Cropping intensity was empirically measured by computing cropping intensity index based on the formula suggested by Sinha and Kolte (1974).

$$\text{Cropping intensity index} = \frac{\text{Gross (total) cropped area in one year}}{\text{Size of the holding}} \times 100$$

Based on the score obtained from the respondents, they were categorized in to three categories based on mean and standard deviation like, Low < Mean - ½ SD, Medium = Mean ± ½ SD and High > Mean + ½ SD.

7. Innovation proneness: It is the degree to which a farmer is eager in adopting the innovations early in his field (Moulik and Rao, 1973). In this study, the clientele innovation proneness was measured by using the scale constructed by Moulik and Rao (1973). Further, the respondents were categorized into three categories taking mean and standard deviation as measures of check like Low < Mean - ½ SD, Medium = Mean ± ½ SD and High > Mean + ½ SD.
8. Extension service commitment: It was operationalized as the degree to which a farmer has a strong belief and acceptance of extension services, is willing to exert considerable amount of benefit from the extension service and has a strong desire to continue with the extension service (Saravanan, 2003). Based on the score obtained from the respondents, they were categorized in to three categories based on mean and standard deviation like Low < Mean - ½ SD, Medium = Mean ± ½ SD and High > Mean + ½ SD.
9. Clientele satisfaction: It is the degree of satisfaction of the client in respect of relevancy, quality, usefulness and customer (client) service of the extension services (Saravanan *et al.*, 2004). For measurement of the clientele satisfaction, scale developed by Saravanan *et al.*, (2004) was used. Further, based on the score obtained by the respondents in each dimension, the respondents were categorized into three categories taking mean and standard deviation as measures of check such as Low < Mean - ½ SD, Medium = Mean ± ½ SD and High > Mean + ½ SD.
10. Problems in receiving extension services: Based on the review of literature, discussion with the extension experts, faculty members, academicians and extension personnel eight major problems or constraints in receiving extension services has been identified and included in the interview

schedule. Then based on the mean and standard deviation the respondents were categorized in to three categories Low $< \text{Mean} - \frac{1}{2} \text{SD}$, Medium $= \text{Mean} \pm \frac{1}{2} \text{SD}$ and High $> \text{Mean} + \frac{1}{2} \text{SD}$.

Results and Discussion

Almost cent percent of the clientele were willing to pay for the extension service but the pay range depends on the farm size. The clientele with more land holding were willing to pay more money per season then the clientele with less land holding. The probable cause is that the clientele had expressed that if they pay for the agricultural extension service, there will not be any delay in getting needed information in time and the quality of information services may be improved.

The clientele wanted to pay for plant protection for decreasing the yield loss due to pest and disease attack. They wanted to get market information so that they can harvest the crop when the market price for a particular crop is higher. Knowledge about credit services helps the farmers to borrow money during crisis. They also wanted to pay for the recent cultivation practices of food and vegetable crops so that the production will be increased.

The amount clientele willing to pay was according to the farm size. The clientele with more land holding were willing to pay more money than the clientele with less land holding. The average amount they were willing to pay for different number of messages was ₹ 34.42.

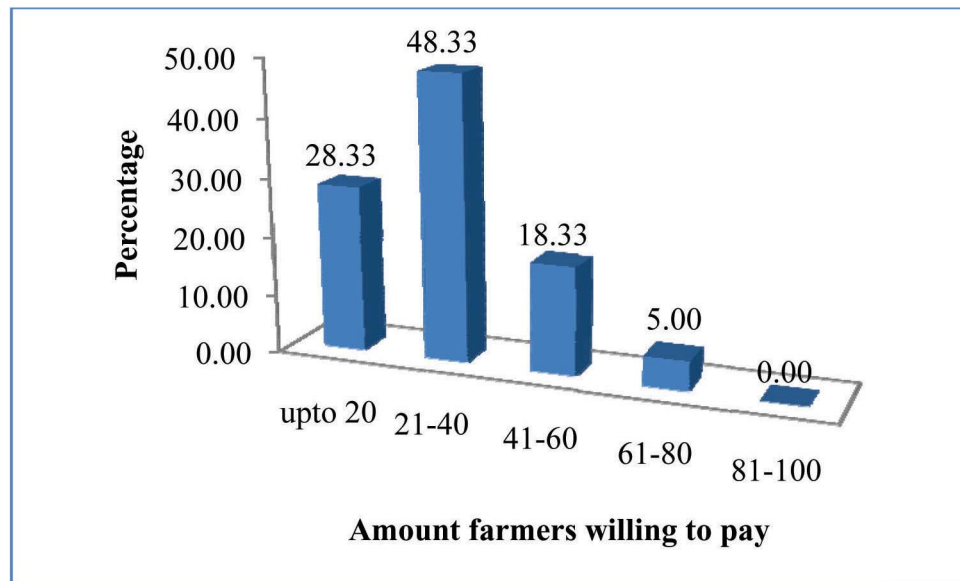


Fig. 1: Percentage distribution of farmers according to the amount they willing to pay

Item wise analysis of the types of messages willing to pay in the Table 2 reveals that the clientele were ready to pay for plant protection (rank I) as the main loss used to happen in agricultural crops because of disease and pest, market information (rank II) because if they know the market price and availability of products before hand, there is a chance of getting higher price for their commodity, credit services (rank III) as the credit is the determinant of input buying capacity of farmers in time followed by cultivation practices of food crops (rank IV), cultivation practices of vegetable crops (rank IV), land development (rank V), post-harvest technology (rank V), new variety / new hybrid (rank VI) and so on.

Disease and pest affect the yield adversely, so plant protection is very much important for farmers for increasing yield. As most of the farmers were cultivating rice the major diseases are blast, tungro, leaf blight, false smut, seedling blight, rot etc. and major pest were stem borer, green leaf hopper, gandhi bug, case worm, gall midge, hairy caterpillar etc. Marketing information and credit services are another important parameter for getting higher price of the end product and for buying input in time. There are only two regulated market in Tripura. Moreover, both the regulated market is in the west district. So it is not possible for all the farmers to sell the produce in the regulated market. Hence, they need updated market information from the local market. The farmers were following the traditional cultivation practices of food crops and vegetable crops for long time and most of them were satisfied with the traditional methods. But, they need information on recent developments in the cultivation practices of food as well as vegetable crops, so they were willing to pay for getting recent information on crop cultivation practices. Most of them want to pay for new variety/ new hybrid, post-harvest technology, land development *etc.* as the local varieties tests better than the hybrid one, cost of post-harvest equipment is very high and they were somewhat aware about the land development practices. Very few of the farmers need information on poultry, dairy, crop insurance, seed treatment *etc.* because most of them does not have any poultry as well as dairy unit, crop insurance was not practicable in the area and they do not have proper knowledge about the benefits of seed treatment.

Table 2: Ranking of types of messages farmers' willingness to pay

Sl. No.	Types of messages	Index	Rank
1.	Plant protection	100	I
2.	Marketing information	93.33	II
3.	Credit services	86.67	III
4.	Cultivation practices of food crops	80.00	IV
5.	Cultivation practices of vegetable crops	80.00	IV
6.	Land development	76.67	V
7.	Post- harvest technology	76.67	V
8.	New variety / new hybrids	73.33	VI
9.	Cultivation practices of fruit crops	63.33	VII
10.	Irrigation management	63.33	VII
11.	Seed production	63.33	VII
12.	Nursery management	60.00	VIII
13.	Cultivation practices of flower	60.00	VIII
14.	Seed treatment	56.67	IX
15.	Crop insurance	46.67	X
16.	Dairy	30.00	XI
17.	Poultry	30.00	XI

The farmers' land holding (farm size-wise) category wise average rupees willing to pay for extension services per season is shown in the Table 3. It can be seen from the table that marginal farmers were willing to pay ₹ 25.89; followed by small farmers ₹ 35.50, medium farmers ₹ 42.14 and large farmers ₹ 80 on an average.

Table 3: Average money willing to pay by different clientele category

Sl. No.	Farmers category	Land holding size	Average Rs. willing to pay
1	Marginal farmers	Up to 2.50 ac of dry land	25.89
2	Small farmers	2.51 to 5 ac of dry land	35.50
3	Semi medium farmers	5.1 to 10 ac of dry land	42.14
4	Medium farmers	10.1 to 25 ac of dry land	80.00

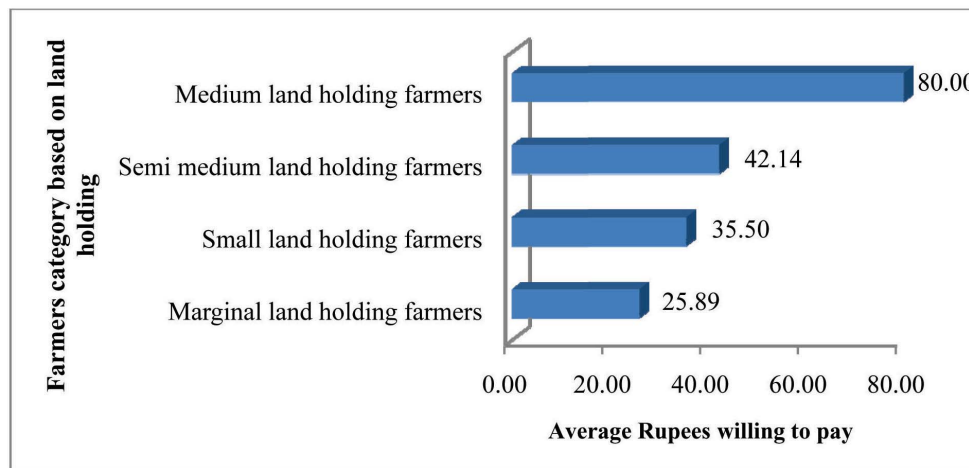


Fig. 2: Farmers land holding category and average Rupees willingness to pay for extension services

Categorization of Farmers' Characteristics and their Association with Willingness to Pay

Table 4 indicates that clientele had medium and low level of education that means up to 12th standard. In Tripura those who do not go for school, had inherited property and they used to select farming as their main occupation. The person with high educational qualification used to go for government job and some used to start business. So the majority of the farmers who were in contact with the department had medium level of educational qualification. The clientele had medium and low farming experience which is due to the fact that majority of the clientele were young. The literate farmers regularly contact the department as they know facilities they are about to get. The old illiterate farmers hardly contact the

department for farming advice because they are happy with their traditional farming. Majority of the clientele had low annual income, which is due to the fact that the department used to concentrate on resource poor farmers for helping them. For majority of the clientele, agriculture was the only occupation with limited land holding, which is another cause of low income. Most of the clientele were small land holding farmers followed by medium and marginal land holding farmers. The possible reason is that in the recent times the families are nuclear in size and joint family system is fading away. This has resulted in fragmentation of land among the family members. Most of the clientele had low irrigation intensity; this is due to the fact that agriculture in Tripura is mainly rain fed. Most of the clientele were poor having small land and were not able to afford costly irrigation equipment's. Moreover, very limited farmers used to get subsidy for enhancing irrigation facilities. More than one-third of the clientele had low cropping intensity which is because of the fact that they don't have irrigation facility and majority of them follow double cropping with rice based cultivation. Very few number of clientele used to go for triple cropping with rice. Some of the clientele used to go for winter vegetable after rice cultivation but they don't cultivate vegetable in the whole area. Almost half proportion of clientele had medium level of innovation proneness, this is due to the fact that majority of the clientele were young and because of their good educational qualification, they had interest on the latest developments and technologies. Clientele were curious about the recent technologies in agriculture and they were always one step ahead to adopt affordable new innovations compare to old aged farmers. The clientele had expressed high and medium level of extension service commitment, which is due to high accountability of the extension personnel specially Village Level Workers (VLWs) to the clientele, need based and timely services, input supply, communication of recent technologies and committed services by the extension personnel. According to the clientele the major problems in receiving extension services were timely availability of the extension personnel to provide advisory services, lack of inter-agency cooperation both in program planning and implementation, lack of use of mass media channel by the extension personnel, technical language use in communication media *etc.*

It can be seen from the Table 4 that there was significant association between willingness to pay and extension service commitment of the clientele. It is due to the fact that the farmers were more or less satisfied with the services provided by the department, the clientele were willing to continue receiving services from the department and VLWs and Agriculture Officers (AOs) were the faithful source of information for the clientele.

Table 4: Categorization of farmers' characteristics and their association with willingness to pay

Sl. No.	Characteristics	Category	Percentage	Mean	Chi-square value
1	Education level	Low	43.33	-	1.02
		Medium	46.67	-	
		High	10.00	-	
2	Farming experience	Low	36.67	10.52	7.12
		Medium	36.67	22.57	
		High	26.67	35.33	
3	Annual income	Lower class income	56.67	14607.14	4.97
		Middle class income	41.67	34800.00	
		High class income	1.67	90233.33	
4	Farm size	Marginal farmers	25.00	2.2	7.45
		Small farmers	41.67	4.33	
		Semi medium farmers	30.00	8.09	
		Medium farmers	3.33	14.5	
5	Irrigation intensity	Low	38.33	34.72	5.02
		Medium	33.33	70.93	
		High	28.33	130.87	
6	Cropping intensity	Low	36.67	107.36	3.20
		Medium	35.00	156.31	
		High	28.33	237.91	
7	Innovation proneness	Low	20.00	6.42	5.74
		Medium	46.67	8.25	
		High	33.33	10	
8	Extension service commitment	Less committed	26.67	29.19	11.50*
		Medium committed	30.00	32.83	
		More committed	43.33	35.58	
9	Clientele satisfaction	Low	25.00	32.88	9.91
		Medium	36.67	37.81	
		High	38.33	41.57	
10	Problems	Less	35.00	8.19	5.98
		Moderate	35.00	10.62	
		More	30.00	12.67	

*Significant at 5% level

Conclusion

The results of the study revealed that there is considerable scope for initiation of paid extension services in agriculture. Public sector organization like DoA should initiate consultancy services and need based extension services for foodgrain as well as non-food grains crops. The fees collected could be a potential source of funds for the DoA to meet its declining operational funding. As the amount farmers willing to pay are dependent on their size of the land holding, the DoA should not concentrate on only big farmers having more land, they should put more attention on marginal and small farmers. The DoA can collect a pre-decided minimum amount of money which will help the farmers to become a partner in the dissemination process of information. Moreover, the collected money may be used when there is

no fund from the government side. Reward should be given to the extension personnel based on number of contact they made in a year and amount of money collected but there should be a pre-decided minimum amount of money. The extension personnel should not be allowed to collect money according to their wish. The farmers should be made more innovative and their extension service commitment should be improved.

Policy implications

- Fee based extension services may be introduced for important topic based on farmers' preferences. By introducing fee based extension services and providing incentive to the extension personnel based on performance in creating revenue to the department will improve the clientele accountability of the extension personnel and extension service commitment of the clientele.
- The department should concentrate on providing information on plant protection, market information and information on credit services.
- The DoA should not engage in providing information regarding poultry and dairy.
- As the farm size of the farmers cannot be increased, the irrigation intensity should be improved to increase cropping intensity.
- The innovativeness and extension service commitment should be developed more strong by providing information on recent developments in time.
- Clientele satisfaction with the extension services should be improved through providing need based advisory services.
- The problems faced by the clientele such as timely non-availability of extension personnel, cooperation with other developmental agency and localization of the content should be solved with urgency.
- The department can introduce clientele specific information delivery system.

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