Bangladesh Journal of Extension Education *ISSN 1011-3916*
Volume 27, No. 1&2, 2015: 93-101 *Research Article*

Impact of Using Pictorial Database *Krishoker Janala* (Farmer's window) in providing Agricultural Advisory Services

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Abstract

The study was conducted in Fulbaria upazila under Mymensingh district from 2 January 2015 to 20 September 2015 to find out the impact of using a pictorial database known as *Krishoker Janala* (Farmer's Window) in providing agricultural advisory services to the farmer. A total of 200 service recipients (farmers) were interviewed. Several pre-tested questionnaires were used and focus group discussions were conducted to collect data from the farmers. The study revealed that through using this pictorial database, plant problems can be identified correctly and appropriate suggestions can also be provided to farmers easily. Data revealed that through using the database cost of delivering service or having service (up to 86%), time needed for delivering service or having service (up to 66.67%, while average 48%) and number of visit can be reduced. Both quality and quantity of service increased by the intervention of the new system and level of satisfaction of the farmer receiving service through the database is very high. An overwhelming majority of 94% respondents have the opinion that the new intervention is most suitable for them.

Keywords: *Pictorial database, appropriate suggestion, service delivery, impact, satisfaction*

Introduction

Knowledge is considered as the fourth production factor after labor, land and capital (AFAAS, 2011). In the field of agriculture extension, this saying is more applicable. To provide knowledge based agriculture extension services to the farmer, Information and communication technology (ICT) intervention is a potential means. Government of Bangladesh planned Strengthening use of ICT in Agricultural Extension Services (MoA, 2015).

Use of smartphone and other electronic devices is increasing day by day. In this reality, developing and using device responsive extension tool can play a vital role in disseminating agricultural information, knowledge and providing agricultural advisory services effectively. *Krishoker Janala* (Farmer's Window) is such an initiative for the farmers and agricultural extension workers who need services and information regarding plants' diseases and associate problems with minimum cost, time and frequency of visits. When a farmer comes to agricultural office or to an agricultural extension worker, sometimes he/she fails to come with a symptom of the problem or the farmer fails to explain the problem clearly before the extension worker and thus it becomes difficult for the extension worker to identify the problem. The extension worker then has to make field visit to identify the problem and suggest requisite solution to overcome the problem. The process is costly in terms of both money and time. The problem becomes difficult when the farmer is a tribe

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or disabled one. ICT intervention can play an important role in simplifying existing services and creating new opportunities so that all types of farmers can get services.

Objectives of the Study:

Broad objective of this study was to find out the monitory and non-monitory benefits of farmers who take services from *Krishoker Janala*. The study was also compared the previous system of service delivery with the new one.

Specific objectives of this study were:

- to determine the amount of time of beneficiaries or farmers saved by using *Krishoker Janala,*
- to determine the amount of cost of beneficiaries or farmers saved by using *Krishoker Janala,*
- to determine the number of visits of beneficiaries or farmers saved by using *Krishoker Janala,*
- to assess the non-monitory benefits of farmers who take services from *Krishoker Janala.*

Methodology

The proposed study was based upon two types of data - secondary and primary. Secondary data were collected from various sources to fulfill the objectives of the study through reviewing secondary documents. During the study, major focuses of the review included, among others, the following:

i) Project proposal of *Krishoker Janala*
ii) Publications of *Krishoker Janala* e.g. folder, leaflet
iii) Reports of *Krishoker Janala*
iv) Innovator's interview
v) Upazila Agriculture Officer's opinion

For primary data 200 service recipients (farmers) were interviewed. Several pre-tested questionnaires and interview schedules were used and focus group discussions were conducted to collect data from the farmers. Data collected from the respondents were compiled, tabulated and analyzed in accordance with the objective of the study.

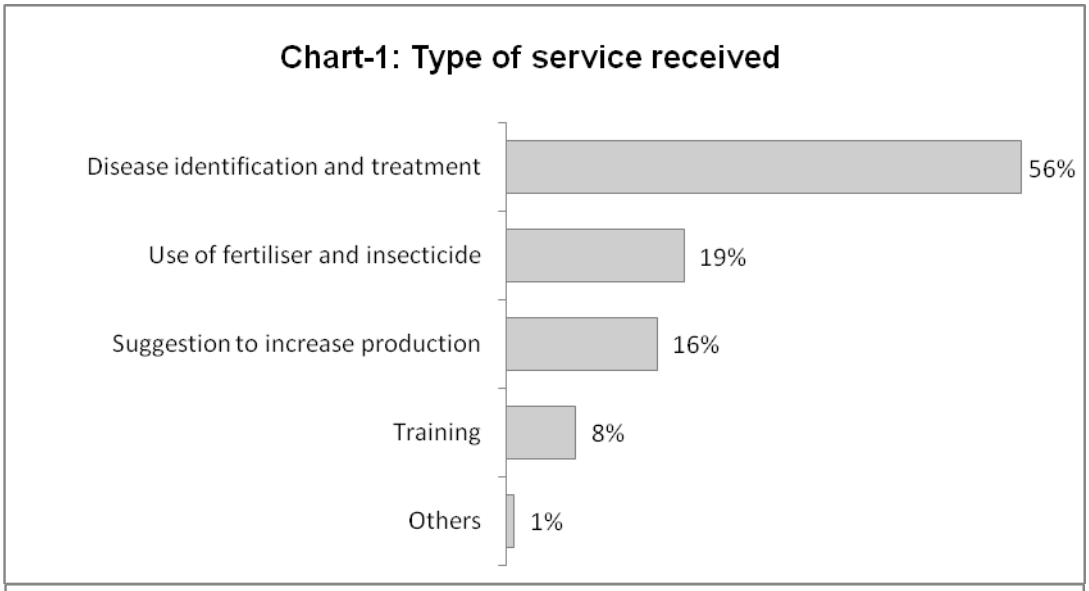
The monitory benefits are related to the exploration of the reduction of time, cost and visit. The non-monitory services are related to the behavior of service providers, service quality, advantages and disadvantages of the service, Satisfaction level of service recipient & appropriateness of the provided service.

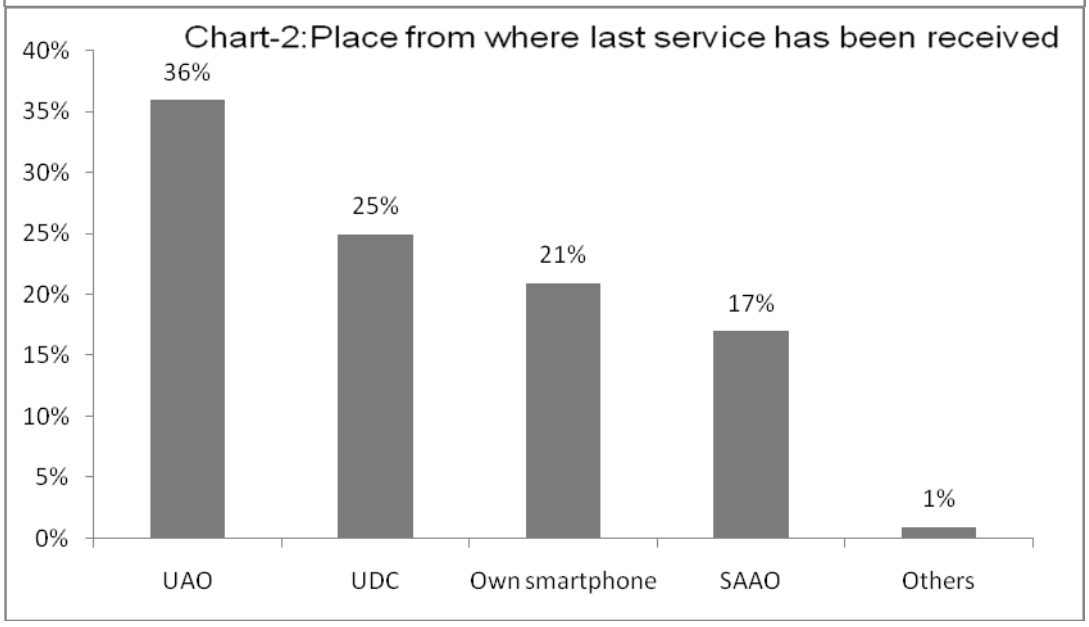
Findings and Discussion

The study findings showed that time, cost and visit(TCV) required from farmer's side to have the service have reduced significantly. Through the intervention of *Krishoker Janala* the average time 48%, average cost up to 86% and number of visit 66.67%has reduced. At the same time it reduced people's hassle, complain against service provider, increased the satisfaction level of beneficiaries. These are the basic findings of this study.

The service has a positive impact among the population, though it came up with few recommendations to improve the service. Major recommendations of this study finding are to increase the internet speed.

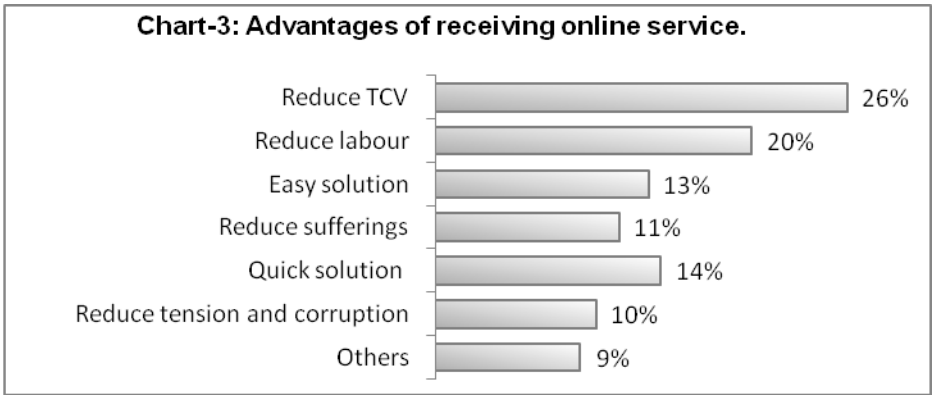
Services are provided to the farmer through *Krishoker Janala* in a systematic way. In *Krishoker Janala* advisory services are available on problem of crops. Suggestions on problems of crops like insects, diseases and nutritional deficiencies are available in the database. *Krishoker Janala* is actually a digital system of plant's problem identification. Farmers get two major types of services from this system viz. problem identification and appropriate suggestion of the problem.



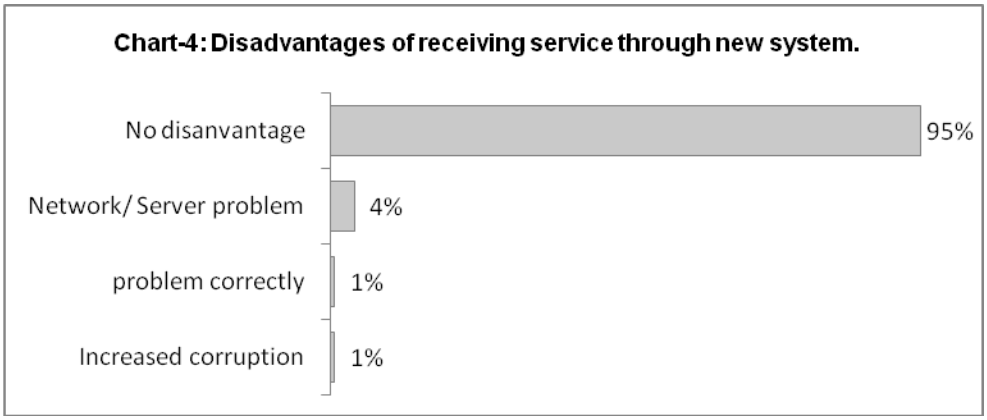


The study shows that, 56% farmer takes this service to identify disease and to have treatment. Few of them (19%) use this service for fertilizing and uses of insecticides.

The data revealed that36% farmer received the service from Upazila Agriculture office (UAO) and 25% of people get the service from Union Digital Centre (UDC), among the respondents 21% farmer get the facility from their own Smartphone or other devices. At the other end, 17% people get the service from sub-assistant agriculture officer (SAAO) of their locality.

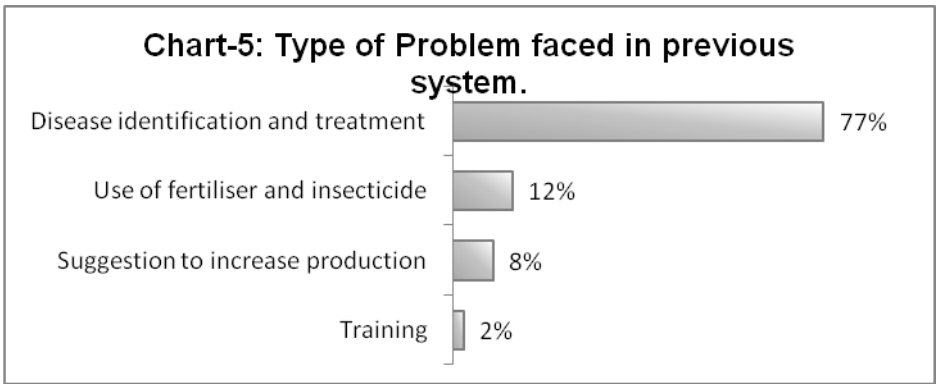


Among the service recipient of *Krishoker Janala*, 26% of the respondents mentioned that - this service has reduced their consumption of time, cost and visit. A significant 20% respondents mentioned that this service has reduced their labor. Farmers got an easy solution of identified problem, 13% informant mentioned this advantages.

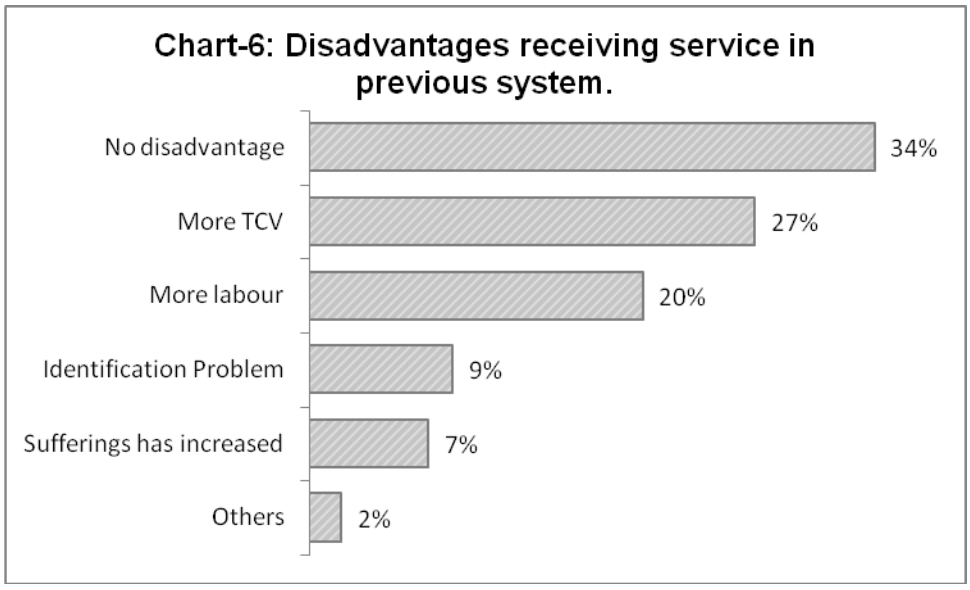


Besides, the respondent also mentioned that the digital system has reduced their sufferings, they now can avail quick solution of their plant's problem. An overwhelming majority of 95% of respondents mentioned that they don't face any problem while availing this service. They mentioned no disadvantages of the

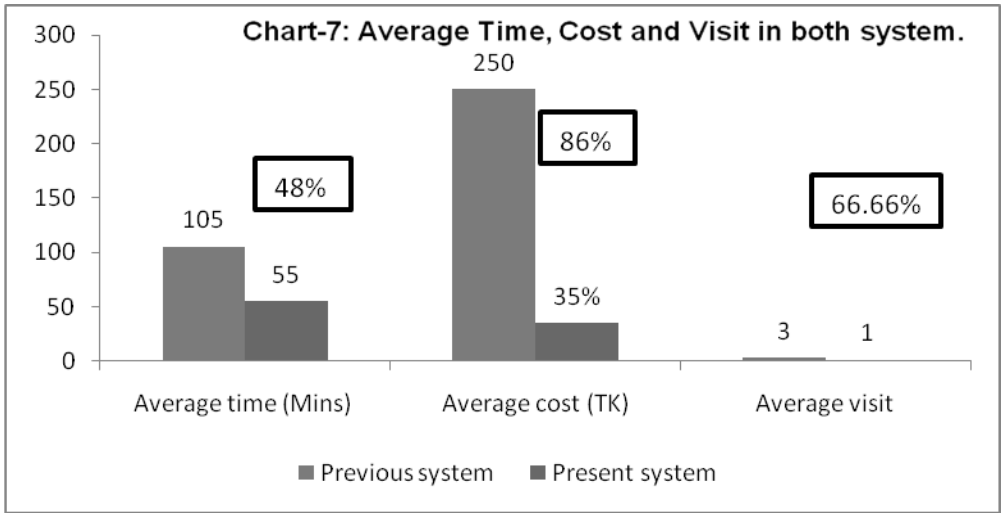
service. A few respondents complained about network or sever problem.



In previous system, respondents mentioned that they faces problem in disease identification and treatment of plants. Other problems they face in using fertilizer and insecticides and having suggestion to increase production. On the other hand in previous system, many respondents mentioned that this process consume high time, cost and visit. A total of 20% respondent indicated the previous system took more labor.



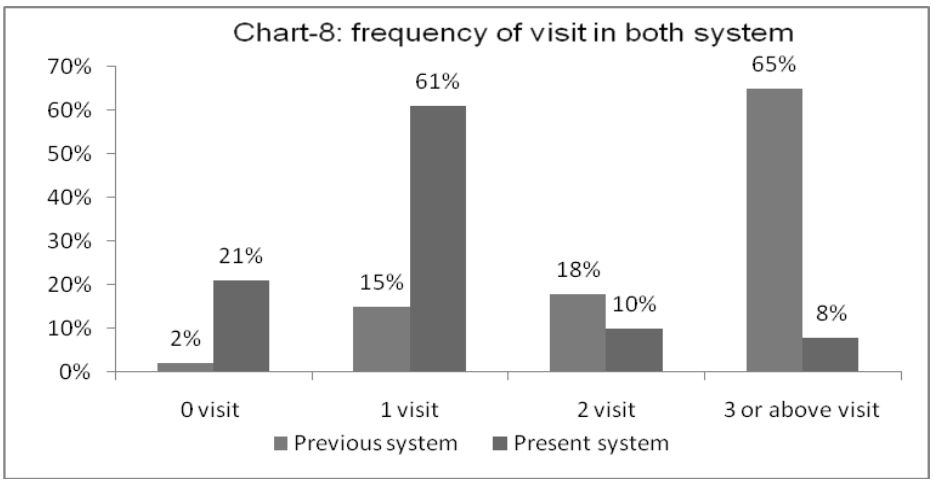
Time, cost and Visit (TCV):

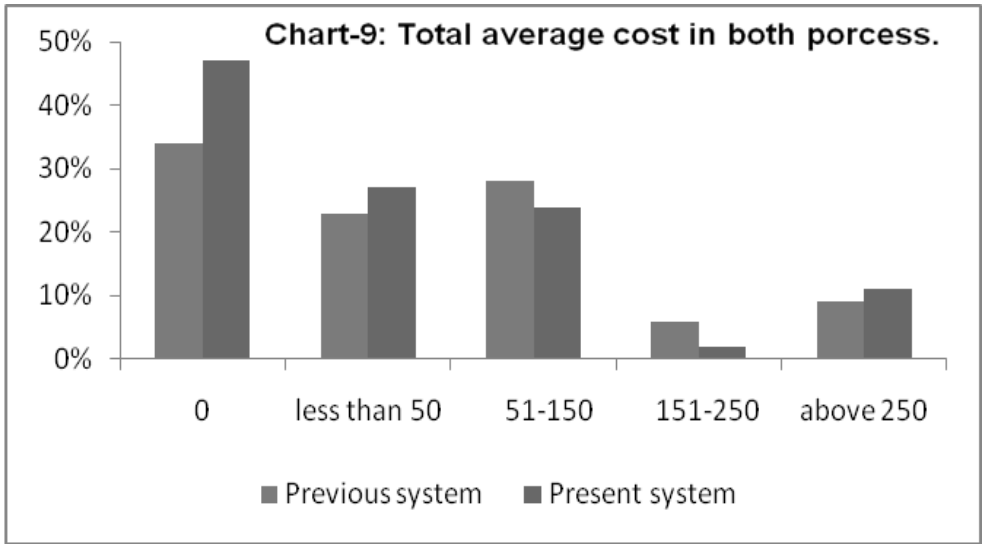


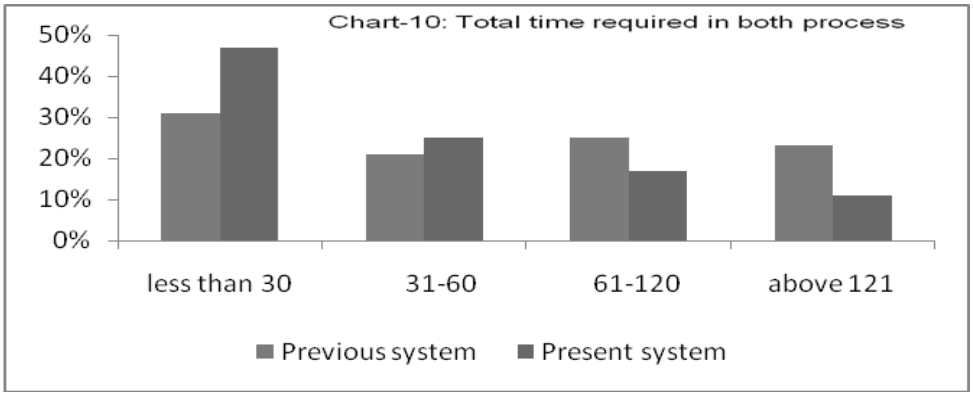
The study finding focused on the monitory and non-monitory benefit of the new service system. In the time, cost and visit (TCV) part, it describes the comparison between the before and after scenario in terms of TCV. Analysis focuses that after implementing the new service delivery system, the average time has been reduced 48%, Cost has been deducted 86% and number of visit reduced 66.67%.

On the separate analysis of visit and cost, the differences of the processes are as given in the chart. The analysis shows that- taking the digital service in manual process and online process 21% got it in 0 visit and 22% get the service in 0 visit. On the other hand, 54% got the service manually in one visit and 65% get the service in online through one visit. An amount of 17% manual user got it in 2 visit and 10 percent get the service in two visit.

The analysis of cost shows that in 47%of users in online process does not pay any money to get the service on the other hand 28% manual users had to pay taka 51- 150 to get the service.







This analysis focuses on the non-monitory benefits and other related thing of this initiative. Getting access to this service, 52% of informants get the government officials behavior toward them as very good and 47% of them mentioned their behavior as good other one percent rated their behavior as moderate. Satisfaction levels of the farmers after getting the service are as following. 54% of respondents are very satisfied with the service, 41% of them are satisfied with the service.

After getting all the opinion, problems and advantages, 94% of the informants appreciate *Krishoker Janala*.

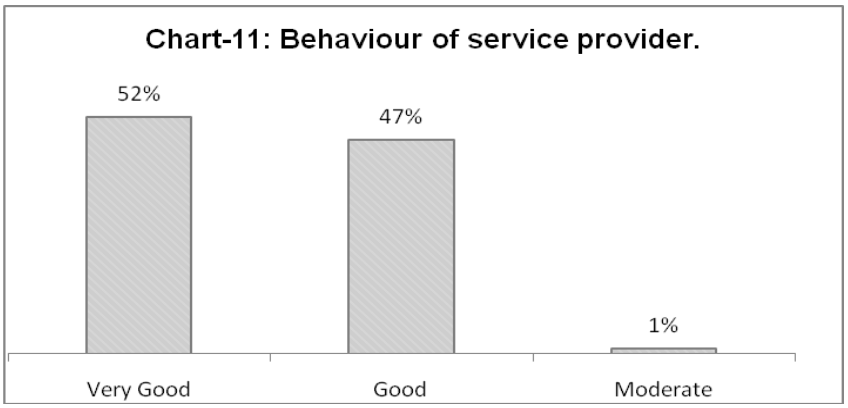


Chart-11: Behaviour of service provider.
52%
47%
1%
Very Good
Good
Moderate

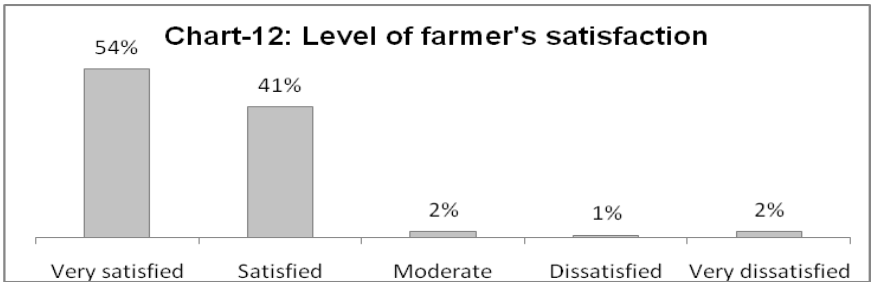


Chart-12: Level of farmer's satisfaction
54%
41%
2%
1%
2%
Very satisfied
Satisfied
Moderate
Dissatisfied
Very dissatisfied

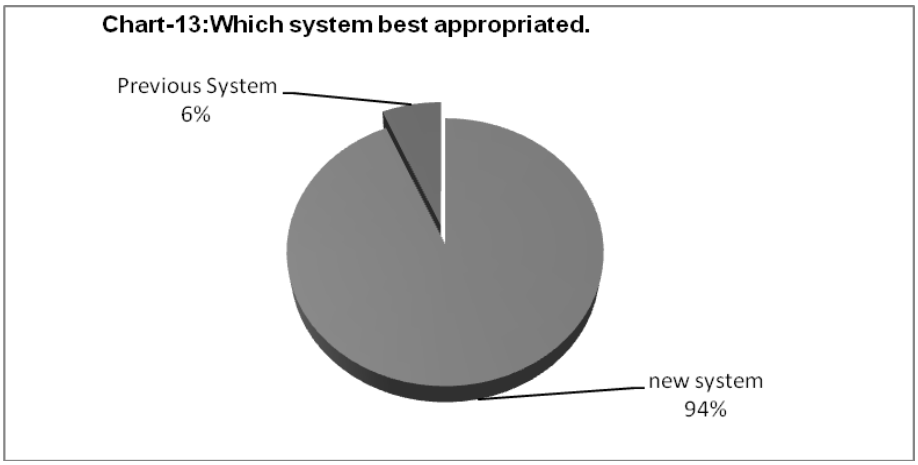


Chart-13:Which system best appropriated.
Previous System
6%
new system
94%

Conclusion

Study reveals that through using *Krishoker Janala* in providing agricultural advisory services to the farmer; time, cost and visit can be reduced significantly. Study also reveals that the quality of service and level of farmer's satisfaction can also be increased through using *Krishoker Janala* as an agricultural extension tool.But there are some challenges like regular updating the database and electricity problem in the rural area. How ever, it can be concluded that *Krishoker Janala* has significant positive impact in providing agricultural advisory services to the farmer.

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