

Original Research Article

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## A Study on Effectiveness of Advisory Services Rendered by Agro-Input Dealers in Jorhat District, Assam

Adrija Borah<sup>1\*</sup>, Sundar Barman<sup>2</sup>, Rekhamoni Gogoi<sup>3</sup> and Indrajit Barman<sup>4</sup>

<sup>1</sup>Young Professional (Social Mobilization, Institution Building & Capacity Building), State Mission Management Unit, Assam State Rural Livelihood Mission Society, Under Ministry of Panchayat & Rural Development, Govt. of Assam, Panjabari, Guwahati, India

<sup>2</sup>Department of Extension Education, FA, AAU, Jorhat, India

<sup>3</sup>Department of Sericulture, Office of the Assistant Director of Sericulture, Barpeta, Assam, India

<sup>4</sup>Department of Extension Education, BNCA, AAU, B. Chariali, India

\*Corresponding author

### ABSTRACT

The study reveals that majority of agro input dealers (60%) had medium level of knowledge about selected crops with correct knowledge about recommended 'varieties of crop' and their agronomic, water management and weed management practices. Farmers perceived the agro advisory services rendered by input dealers as moderate level. Simplicity to operate, effective in pest and disease management' and increases productivity of crops were the major dimensions for assessing the effectiveness of advisory services. Language problem while talking with dealers' 'lack of updated information' and slow in addressing farmers problems were problems for farmers while not able to meet company personnel at urgent times', 'Lack of time for field visits on farmer request', 'Insufficient feedback from farmers about performance of agro-advisory services were problems for agro input dealers. Efforts of concerned department should put forward for establishing better coordination in between farmers and input dealers which may enhance effectiveness of extension roles of input dealers besides their economics role.

#### Keywords

Agro input dealers, knowledge level, effectiveness of agro advisory services

#### Article Info

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### Introduction

Information plays a major role in innovation decision process. Right type of information at right time is essential for farmers making right decision to improve their technologies

adoption and living standards. Again, sources of information are different and it varies depending upon location, preferences, credibility of sources. Information related to agricultural technologies reached to farming communities broadly through public extension

system, private extension system and mass media including ICTs.

The problem faced by the farming sector cannot be solved by the Public Extension System alone. So, in order to overcome the upcoming challenges, attention has been given for multi-agency extension services such as Private Agri Input Companies, Farmers' Organizations, Agripreneurs, Cooperatives and other agencies in the Non-governmental sector, including practicing Input Dealers in Farm Advisory Services. Among these agencies, Agri-Input dealers is one of the important information source for the farmers as they are first contact point and available at any time. Around 60% of farmers still remain unreached i.e. not served by any extension agency or functionaries (NSSO, 2014).

Agro-input dealers are considered as an important source of information who provide technologies as well as information to the farming communities in their localities.

The input dealer has no specificity for qualification to get license from the government and has inadequate knowledge about agricultural technology. So, training has to be provided to get better knowledge and skills to act as an extension service provider by competent institutes (Sharma, 2017). Agro-input dealer serves as an important link between the manufacturers and the farmers. So he has the responsibility to disseminate latest farm technology up to the field level especially in the era of the free economy and world trade organization.

About 2.84 lakh agro-input dealers are operating in rural areas covering all parts of the country. Though not equipped with adequate knowledge, dealers are one of the most important sources of information for farmers. This was also revealed through the NSSO (2005) assessment.

In North East region presently 1324 number of registered agro-input dealers directly deal with farmers. Out of which Assam has the highest number of agro-input dealers *i.e.* 945; followed by Tripura having the second highest number of agro-input dealers *i.e.* 292; and Meghalaya ranks third with 61 numbers of agro-input dealers. Out of 33 districts in Assam, Barpeta has the highest number of Agro-input dealers *i.e.* 93; followed by Tinsukia and Dibrugarh having 90 numbers of agro-input dealers each; and Sonitpur ranks third with 88 number of Agro-input dealers. Jorhat ranks ninth with 43 numbers of agro-input dealers ([http://www.mfms.nic.in/wr\\_state\\_supply\\_chain/North%20East%20Zone%20Retailers.xls/](http://www.mfms.nic.in/wr_state_supply_chain/North%20East%20Zone%20Retailers.xls/)).

Extension officers and the public extension system though have good network but due to lack of manpower and mobility cannot provide advisory service to farmers up to their satisfaction level. The main problem in case of agro-advisory services provided by public extension system for reaching to the farmers is the gap in communication process. In our country the ratio of extension agents and farmers is 1:2000. So it is not possible for the extension workers to communicate with each and every farmers individually. So the advisory services reach the farmers indirectly through various sources. As farmers are more inclined toward local source of information, agro-input dealer may be their preferred source for getting farm advisory services. Though, the agro-input dealers have been rendering their services but their education, experience and motivation to service is matter of concern for environment point of view. Many a time, agro-input dealers are guided by company people who are basically profit motive. This may encourage for selling of non recommended pesticides and chemical and resulting adverse effect in climate in general and human and animal health in specific. So, systematic assessment of agro-input dealers in

farm advisory perspective will reduce health hazard and enhance the proportion of information reach farmers. The eventual goal of this type of research was to shorten the time gap for agricultural information to reach for widespread uses among the farmers. Again cost involved in advisory service may be reduced and its access can be enhanced by incorporating agro input dealers as stakeholder in the communication process. Hence the present study was carried out to assess the knowledge level of the agro-input dealers on recommended cultivation practices of selected major crop, analyse the perceived effectiveness of agro -advisory services provided to the farmers and elicit the problems encountered by both agro-input dealers and farmers in the process of advisory services.

## **Materials and Methods**

Ex-post facto research design was followed for the study. The research was carried out in Jorhat district of Assam as it is one of the important rice growing districts and Titabor-Borholla area in the district which extends to Sarupathar in Golaghat is considered as the rice bowl of the state. Also vegetable is cultivated in large scale both in *rabi* and *kharif* seasons. Out of 43 licensed agro input dealers 30 dealers were selected randomly and 3 farmers were selected against each dealer which was a total of 90 farmers. A total of 120 respondents consisting 30 agro input dealers and 90 farmers were considered for data collection.

All total 10 socio personal characteristics namely age, education, number of years of experience as dealer, annual income, extension contact, farming experience, mass media participation, participation in extension activities, source of finance, mass media participation and problems faced by the agro input dealers and farmers in connection to agro advisory service rendered by agro input

dealers were studied. Knowledge about package of of practices (POP) about major selected crops of agro input dealers were assessed through structured knowledge test prepared for this purposes. Moreover, farmers' perception on effectiveness of agro advisory services rendered by agro input dealers were measured in 4 point continuum as highly effective, moderately effective, less effective and not effective with score of 3, 2, 1 and 0 respectively in 10 different dimensions of agro advisory services.. Data were collected from the selected respondents by using pre tested interview schedule developed for the study. Appropriate statistical tools and techniques were used for analysis and interpretation of data.

## **Results and Discussion**

### **Profile characteristics of agro input dealers**

The findings from Table 1 with regard to the selected characteristics of the agro input dealers indicates that majority of the input dealers were middle aged (76.67%), completed higher secondary (46.66%), high experience as a dealer (66.67%), medium farming experience (60%), medium level annual income (70%), majority of dealers (46.67%) deals with fertilizer, pesticides and seeds. Majority of dealers (70%) had their own fund and medium level of extension contact (83.33%). The participation in extension activities and mass media of input dealers had medium level for majority respondents of 56.67%. and 60% respectively.

### **Distribution of input dealers based on their level of knowledge in selected major crops**

The findings with regard to the knowledge level of agro input dealers about selected crops (Table 2) indicated that majority of the input dealers had medium knowledge level (60%), followed by low knowledge level

(23.33%) and high knowledge level (16.67%). Similar finding was reported by Sarda and Gill (2005) and Prajapati *et al.*, (2015).

The Fig 1 depicts that in case of paddy, majority of the input dealers had correct knowledge on 'variety of crop', agronomic practices, water management, pest and disease management and weed management.

In case of vegetables and pulse, variety and agronomic practices were known correctly by more than 70 per cent input dealers while in case oilseed crop only agronomic practices were correctly known by majority respondents followed by weed management. The correct knowledge about fertilizer management in all selected crops were possessed by less proportion of input dealers. This may be due to lack of awareness of input dealers about recommended package of practices of selected crops or least contact with public extension system.

### **Farmers' perception on effectiveness of agro-advisory services provided by input dealers**

Most of the advisory services provided by agro input dealers to the farmers were moderately effective (74.44%), followed by highly effective (13.33%) and less effective (12.22%) (Table 3).

This might be due to the fact that agro advisory services are more accessible to resource rich farmers, feasible only in assured resource conditions, higher fee/cost for soil sampling analysis, more general in nature, lack of adoptability in most of the situations and less number of field visit by the input dealers to the farmers' field.

From Fig 2 it is observed that out of ten dimensions asked to the farmers 'simple to operate' was found to be most effective with

WMS 2.7, which is followed by 'pest and disease management' with WMS 2.64, followed by 'Increase productivity of crops' with WMS 2.4, followed by 'Quality of product' with WMS 2.06, followed by 'increase in marketability' with WMS 2.0, followed by 'compatible with existing knowledge' with WMS 1.9, followed by 'fulfil the need of customers' with WMS 1.7, followed by 'Increase profit of farmers' with WMS 1.68, followed by 'Reduce cost of production' with WMS 1.67, followed by 'Environment Friendly, with WMS 1.5.

It can be interpreted that the advisory services given by the agro input dealers were moderately effective for the farmers. This finding is supported the findings of Memuna, *et al.*, (2015).

### **Problems expressed by farmers while receiving agro advisory services**

Almost 100 percent of the respondents stated 'Language problem while talking with dealers' as their major problem, 'Lack of updated information' (93.33%). 88.88 per cent sample farmers stated that dealers were 'Slow in solving problem'. Around 84.44 per cent of the respondents stated 'unavailability of inputs at times' as their problem followed by 83.33 percent of respondents stated 'dealers do not give field visit on request'. 81.11 per cent of the respondents stated 'At times they were given wrong information about doses', 80 per cent of the respondents stated 'Dealers do not have proper information on crop diseases' followed by 76.67 per cent of the respondents stated that 'Pesticides were given according to the profit of dealers' and 74.44 per cent of the respondents stated 'Dealers were not available except working days'. 72.22 per cent of the respondents stated 'rude communication' as their problem. Around 64.44 per cent respondents said they were sometimes given 'poor quality seed'.

**Table.1** Profile characteristics of input dealers

N=30

| <b>Profile characters</b>                    | <b>Category</b>                 | <b>Range</b>            | <b>Percentage</b> |
|--|---------------------------------|-------------------------|-------------------|
| <b>Age</b>                                   | Low                             | Less than 39.94         | 13.33             |
|  | Medium                          | 39.94-53.25             | 76.67             |
|  | High                            | Above 53.25             | 10.00             |
| <b>Education</b>                             | High school                     | 3                       | 20.00             |
|  | Higher secondary                | 4                       | 46.67             |
|  | Graduate                        | 5                       | 30.00             |
|  | Post graduate                   | 6                       | 3.33              |
| <b>Farming experience</b>                    | Low                             | Less than 8.29          | 20.00             |
|  | Medium                          | 8.29-13.31              | 60.00             |
|  | High                            | More than 13.31         | 20.00             |
| <b>Dealership experience</b>                 | Low                             | Less than 7.43          | 16.67             |
|  | Medium                          | 7.43-16.10              | 66.67             |
|  | Large                           | More than 16.10         | 16.67             |
| <b>Annual income</b>                         | Low                             | Less than 2,19,481.06   | 13.33             |
|  | Medium                          | 2,19,481.06-4,64,718.94 | 70.00             |
|  | High                            | Above 4,64,718.94       | 16.67             |
| <b>Type of dealership</b>                    | Fertilizers & Pesticides        | 1                       | 46.67             |
|  | Fertilizers, Pesticides & seeds | 2                       | 46.67             |
|  | Wholesale                       | 3                       | 6.67              |
| <b>Source of fund</b>                        | Own fund                        | 1                       | 76.67             |
|  | Borrowed fund                   | 2                       | 10.00             |
|  | Both                            | 3                       | 13.33             |
| <b>Extension contact</b>                     | Low                             | Less than 10.70         | 13.33             |
|  | Medium                          | 10.70-13.03             | 83.33             |
|  | High                            | More than 13.03         | 3.33              |
| <b>Participation in extension activities</b> | Low                             | <2.33                   | 23.33             |
|  | Medium                          | 2.33-7.67               | 56.67             |
|  | High                            | >7.67                   | 20.00             |
| <b>mass media participation</b>              | Low                             | Less than 4.15          | 26.67             |
|  | Medium                          | 4.15-7.05               | 60.00             |
|  | High                            | More than 7.05          | 13.33             |

**Table.2** Distribution of agro input dealers according to their knowledge in selected major crops (n= 30)

| Category | Range           | Frequency | Percentage | Mean  | SD   | CV   |
|----------|-----------------|-----------|------------|-------|------|------|
| Low      | Less than 68.09 | 7         | 23.33      | 72.57 | 4.51 | 0.06 |
| Medium   | 68.09-77.07     | 18        | 60.00      |       |      |      |
| High     | More than 77.07 | 5         | 16.67      |       |      |      |

**Table.3** Distribution of farmers according to level of effectiveness of agro advisory services provided by input dealers

(n=90)

| Category | range           | Frequency | Percentage | Mean  | SD   | CV   |
|----------|-----------------|-----------|------------|-------|------|------|
| Less     | Less than 19.93 | 11        | 12.22      | 21.16 | 1.23 | 0.06 |
| Moderate | 19.93-22.38     | 67        | 74.44      |       |      |      |
| High     | More than 22.38 | 12        | 13.33      |       |      |      |

**Table.4** Distribution of farmer's according to their problems encountered during receiving of advisory service from agro input dealers

n=90

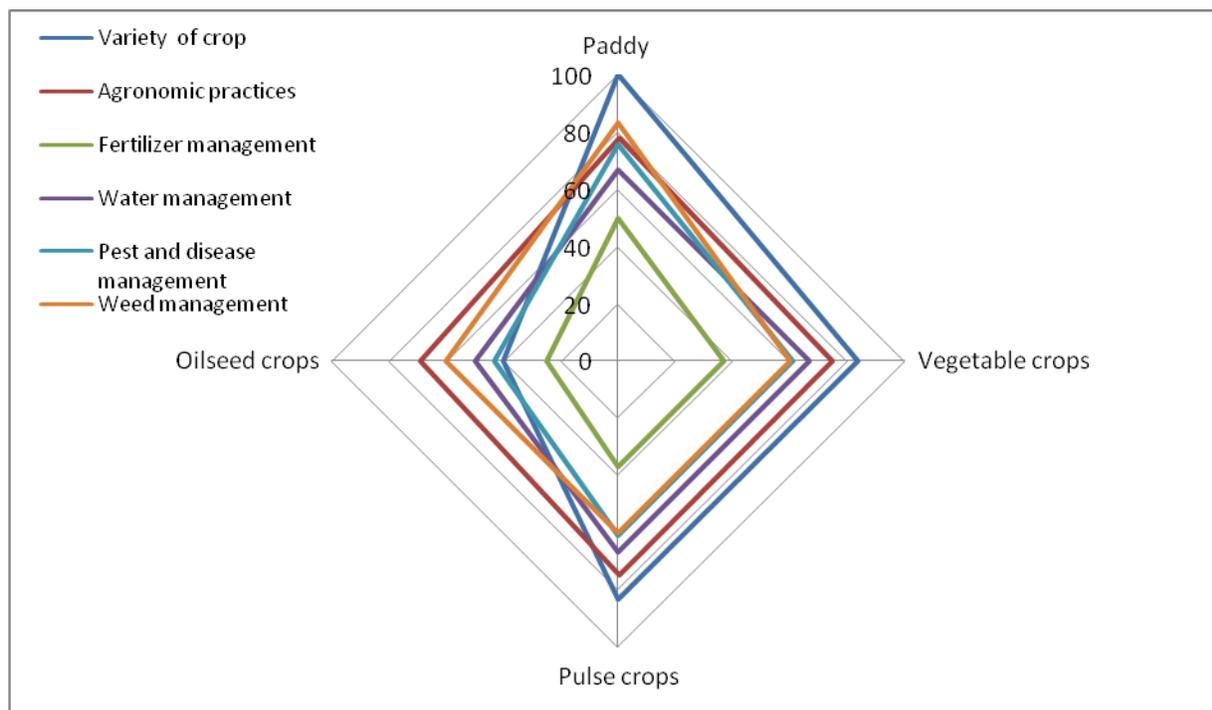
| Related to advisory service                                      | Frequency | Percentage | Rank |
|--|-----------|------------|------|
| Language problem while talking with dealers                      | 90        | 100.00     | I    |
| Dealers were not available except working days                   | 67        | 74.44      | IX   |
| Inputs were not available at times                               | 76        | 84.44      | IV   |
| At times they were given wrong information about doses           | 73        | 81.11      | VI   |
| Pesticides were given according to the profit of dealers         | 69        | 76.67      | VIII |
| Dealers do not give field visit on request                       | 75        | 83.33      | V    |
| Dealers do not have proper information on crop pest and diseases | 72        | 80.00      | VII  |
| Slow in solving problem  | 80        | 88.88      | III  |
| Lack of updated information                                      | 84        | 93.33      | II   |
| Rude communication   | 65        | 72.22      | X    |
| Poor quality seed materials                                      | 58        | 64.44      | XI   |
| Incomplete agro-advisory services in phone calls                 | 50        | 55.55      | XII  |

**Table.5** Distribution of agro input dealers according to their problems encountered during delivery advisory services

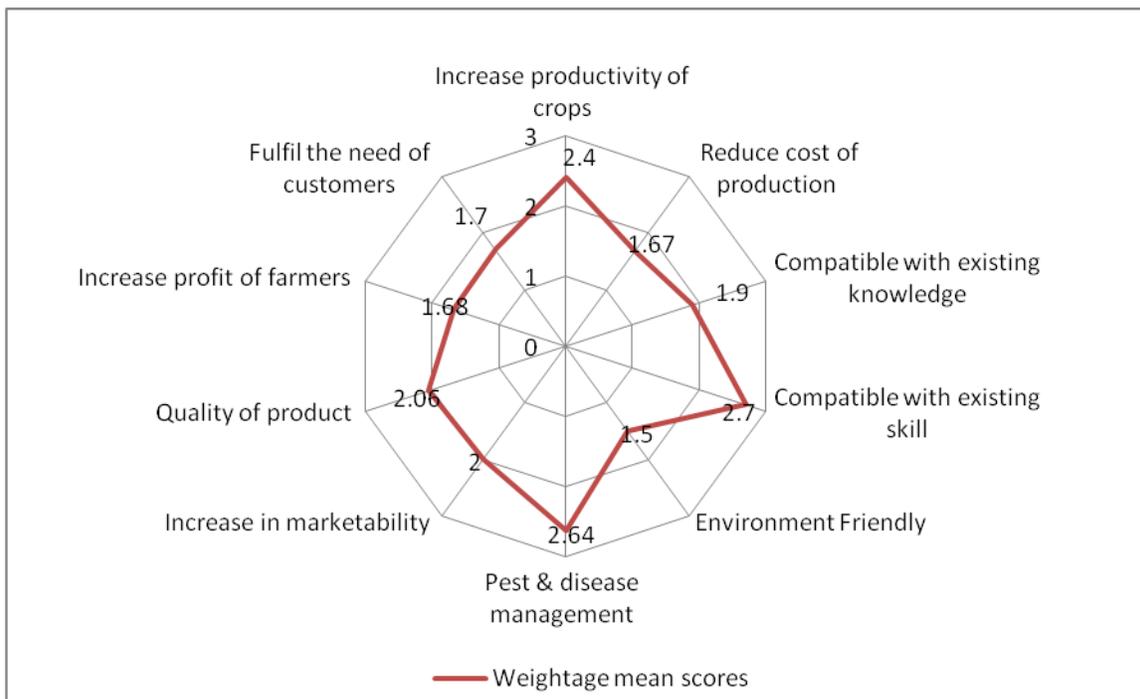
(n=30)

| Problems faced by agro-input dealers   | Frequency | Percentage | Rank |
|--|-----------|------------|------|
| <b>Communication with farmers</b>  | 25        | 83.33      | V    |
| Not able to meet company personnel at urgent times   | 30        | 100.00     | I    |
| Lack of demonstration on dosage of chemical fertilizers  | 23        | 76.67      | VII  |
| Credit taken by farmers  | 20        | 66.67      | VIII |
| Lack of time for field visits on farmer request  | 30        | 100.00     | I    |
| Insufficient feedback from farmers about performance of agro-advisory services.                                    | 30        | 100.00     | I    |
| Lack of sufficient field experience.   | 24        | 80.00      | VI   |
| Inadequate technical qualification of input dealers in agro-advisory services.                                     | 30        | 100.00     | I    |
| Lack of knowledge specifically on different methods of pest control and identification of pests in different crops | 28        | 93.33      | II   |
| Lack of contact with farmers interest groups and other rural institutions to know about field problems.            | 27        | 90.00      | III  |
| Lack of belief in agro-advisory services given by input dealers among farmers.                                     | 26        | 86.66      | IV   |
| No transport facility for input dealers to provide agro-advisory services through field visits                     | 30        | 100.00     | I    |

**Fig.1** Distribution of agro input dealers based on correct knowledge about various aspects of major crops



**Fig.2** Weightage Mean Scores of selected dimensions for effectiveness of agro advisory services



Around 55.55 per cent stated that most of the dealers do not receive phone calls in urgent time and if they do ‘advisory services mostly remain incomplete’.

**Problems expressed by agro input dealers while providing agro advisory services**

Majority (100%) of the input dealers stated that ‘not able to meet company personnel at urgent times’, ‘Lack of time for field visits on farmer request’, ‘Insufficient feedback from farmers about performance of agro-advisory services’, ‘Inadequate technical qualification of input dealers in agro-advisory services’ and ‘No transport facility for input dealers to provide agro-advisory services through field visits’ were their major problems followed by other problems like ‘Lack of knowledge specifically on different methods of pest control and identification of pests in different crops’(93.33%), ‘Lack of contact with farmers interest groups and other rural institutions to know about field problems’(90.00%), ‘Lack of

belief in agro-advisory services given by input dealers among farmers’(86.66%), ‘communication with farmers’ (83.33%), ‘Lack of sufficient field experience’ (80%), ‘lack of demonstration on dosage of chemical fertilizers’ (76.67%), and ‘credit taken by farmers ‘ (66.67%) stated ‘Improper storage facility’ as their problem.

The Agro advisory services rendered by the agro input dealers were found moderately effective by the farmers and knowledge level about the package of practices of major crops was also found moderate level. There is scope to improve effectiveness of agro advisory services by conducting proper training for input dealers and enhancing their participation in extension activities. Inadequate technical qualification of input dealers, insufficient feedback from farmers, paucity of time to visit farmers fields, lack of technology backstopping were some major problems for rendering agro advisory services in time. While complex recommendation of input

dealers, lack of updated information are some problems faced by farmers in receiving the advisory services. Efforts of concerned agencies should put forward for establishing better coordination in between farmers and input dealers may enhance effectiveness of extension roles of input dealers besides their economics role.

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