

Original Research Article

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## Perception of Farmers on Agricultural Extension Service Providers (Public, Private and NGO Extension Service Providers) in Andhra Pradesh, India

S. Naveen Kumar<sup>1\*</sup>, P. Gidda Reddy<sup>2</sup> and R. Ratnakar<sup>2</sup>

<sup>1</sup>*District Agricultural Advisory & Transfer of Technology Centre (DAATTC),*

*PJTSAU, Nizamabad, Telangana, India*

<sup>2</sup>*EEl, ANGRAU, Hyderabad, Telangana, India*

*\*Corresponding author*

### ABSTRACT

#### Keywords

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Majority of the farmers were distributed in the medium category followed by high and low category regarding their perception towards public extension service providers. Whereas most of the farmers were found to be in the medium category and rest of them equally distributed in low and high categories in respect of perception towards private extension service providers. Majority of the farmers were found to be in the high category followed by medium and low category in respect of NGO extension service providers. There was a significant difference in the perception of the farmers towards three extension service providers (public, private and NGO).

### Introduction

Since its inception to till date Agricultural Extension system in India has transformed into different shapes during various agricultural developmental phases according to the needs and interests of the farming community. For the past one and half decade onwards changes have been taking place in every sphere of all the three sectors i.e. Agriculture (primary sector), Industries (secondary sector) and Services (tertiary sector). Secondary and tertiary sector

contribution to Gross Domestic Product (GDP) is more when compared to primary sector.

Agriculture contribution to GDP drastically comes down from 50 percent to 21 percent over the last decade. But the work force in agricultural sector is 65 percent, whereas industries constitute 15 percent and 25 percent in services. Industries and services sectors had captured the abundant opportunities out of information revolution. So it is the time for agriculture sector should

explore benefits out of information revolution. Here, agricultural extension has to play pivotal role being a liaison department of research and farming community. It should be in the form of pluralistic way i.e. combined effort of various departments or organizations or institutions for the same objective i.e. to expose farming community to international market standards and opportunities.

Pluralism in agricultural extension services was studied in Andhra Pradesh state by using exploratory and descriptive research design. It consists three extension service providers namely; Public extension service providers, Private extension service providers and NGO extension service providers. The Andhra Pradesh state was purposively selected for the study due to it is one of the important agricultural state in the country and many extension service providers are the stakeholders in the process of agricultural development. At the same time the findings of the study might be useful not only policy makers of Andhra Pradesh but also various agricultural extension service providers. Gupta (1998) observed that farmers of all categories use veterinary stock man as the major source of information for receiving relevant information regarding dairy farming. Market/private sources ranked second in preference of use of communication sources under this category with 16 percent of the respondents having regular contact and 28 percent having occasional contact. Hanchinal *et al* (2000) reported that most of the farmers had favorable attitude towards privatization. A large majority of the farmers (89.92%) were willing to pay for the technical services rendered in the area of seed production, followed by irrigation technology services and flowers (56.67%), fruit crops (55.00%) and vegetables (52.08%). Katyal *et al* (2000) elucidated that most of the farmers preferred monoclinic for agriculture, veterinary, horticulture and agricultural engineering etc.,

to be run by the experienced farm graduates. They also confirmed that the farmers seek variety of services like advice, inputs, diagnostic and therapeutic services, and support for marketing of their produce. Chavai *et al.* (2003) studied that the majority (64%) of the respondents were not in favor of private extension while 36 percent of the respondents were in favor of private extension services. Majority (72%) stated those 'services for soil, water and plant analysis at reasonable prices' was one of the expected methods of private extension. 'Demonstrations on farmers' fields' and 'visits to successful farmers from and outside the village' were other two methods of private extension services as perceived by 55.55 percent and 50 percent of the farmers respectively. Less than two fifth (38.88%) of the farmers perceived that 'video films' should be one of the methods of private extension services.

## **Materials and Methods**

### **General objective**

To study the public, private, and NGOs as agricultural extension service providers in Andhra Pradesh.

### **Specific objective**

To find out the perception of end users on extension service providers

### **Research design**

Exploratory and descriptive research design was adopted for conducting the study. It serves as a basis for clarifying concepts, establishing priorities, gathering information about research in reality and to describe accurately the parameters or issues involved in the problem selected for research.

## **Sampling procedure**

The sampling procedure comprises i) Selection of State, ii) Selection of Districts, iii) Selection of Villages, iv) Selection of Respondents, v) Selection of farmers and vi) Construction and standardization of Farmers' perception scale

### **Selection of state**

The Andhra Pradesh state was purposively selected as it is one of the important agricultural states in the country and many extension service providers are the stakeholders in the process of agricultural development. Since, the researcher hails from the same state and is familiar with the local language and local setup, it helps in building quick rapport. It also enables the researcher to carry out an in-depth study combined with personal observation. The findings of the study might be useful to not only policy makers of Andhra Pradesh but also to various agricultural extension service providers.

### **Selection of districts**

There are three regions in Andhra Pradesh namely: Telangana, Rayalaseema and Coastal Andhra. These three regions are considered to represent the entire state of Andhra Pradesh. From each region one district was selected purposively where three extension service providers i.e. Public Extension Service Providers, Private Extension Service Providers and Non Governmental Organization Extension Service Providers (NGO ESP) existed. Those selected districts were: Mahabubnagar from Telangana region, Anantapur from Rayalaseema region and Prakasam from Coastal Andhra region.

### **Selection of villages**

In each district, three extension service providers have been providing advisory

services in several clusters of villages. By using lottery method, four villages were selected from each district. Those were; Chinnarajanur, Bandarupalli, Nawabpet and Appireddipalli from Mahabubnagar district; Muttala, Obuldevaracheruvu, Gangulakunta and Nagireddipalli from Anantapur district; and Rangapuram, Turimellaa, Vemulapeta and Chandalur from Prakasam district.

### **Selection of respondents**

This study was undertaken mainly to involve four categories of respondents namely; Extension Service Providers such as Public extension service providers (DAATTC Scientists, ADA's, ADH's, AO's, HO's and KVK scientists), Staff of Private extension service providers and consultants of NGOs who have been providing agricultural extension services to End users are Farmers.

### **Selection of farmers**

From each village 10 farmers who have been utilizing three sources of extension services were selected randomly. Total 120 farmers were selected from all 12 villages of three districts.

### **Construction and standardization of farmers' perception scale**

Farmers' perception was operationalized as the ability of the farmers to see, understand, compare and interpret various extension services delivered by public (or) private (or) NGO extension service providers".

### **Rationales for using likert scale**

Among the different techniques available for the construction of perception scale, the more popularly used techniques are (a) Method of equal appearing intervals known as "Thurstone technique" and (b)The Method of summated ratings popularly known as "Likert

Technique”. Each technique has few advantages over the other. Here, for this study Likert technique was used because of following reasons.

Perception scale with greater reliability coefficient can be developed by this technique in comparison with the Thurstone scale; The also indicated that Likert type scale even with fewer statements will also give higher reliability coefficient

Each item was judged on a five point continuum rather than mere acceptance, rejection of the item.

Simple and easier than the equal appearing interval scale.

The items on a Likert scale provide data on the individual perception about the specific issue covered by the single item as well as total score on the perception dimensions.

By using the scale with a new group, the internal consistency and split half reliability of Likert scale could be quickly checked.

The basic assumption of the summated rating is that each statement in the scale covers the entire continuum and the individuals overall choices of the degree of favourable or unfavourable response which determines the position on the scale.

### **Collection of statements**

Initially 71 statements were collected based on review of literature and in consultation with experts in extension education, eminent professors, NAARM and MANAGE scientists, etc. These statements were edited based on the editing principles and sixty four statements were selected after editing. As a prelude to study the “Pluralism in agricultural extension services”, these 64 statements that

can go into the scale of “Pluralism in agricultural extension services” were given to the 45 judges who had vast experience in extension education. The judges were asked to record the responses to the given statements in the order of their importance on a three-point continuum viz., Most Relevant (MR), Relevant(R) and Not Relevant (NR). They were requested to feel free to add some more statements if he/she feel important, and also delete unrelated statements. After the responses were obtained from the 30 judges, they were given scores as 3 for Most Relevant statement, 2 for Relevant and 1 for Not Relevant statement.

After giving scores to the statements and coding the data, mean was calculated for each statement. Finally, the weighted mean of all statements put together was obtained. All the statements which were having a mean score equal and above of weighted mean were selected and the statements which were below the weighted mean were eliminated. Thus, finally 38 statements out of 64 were selected which formed the scale for pre-testing.

### **Item analysis**

Thirty eight (38) statements were administered to the 60 respondents other than the sample. They were requested to give their response on three point continuum i.e., Agree, Undecided and Disagree for each statement. The total score was calculated for each respondent. Scoring procedure adopted was 3 for Agree, 2 for Undecided and 1 for Disagree. The respondents were arranged in descending order based on their total score. The top 25 percent of the respondents were selected as high group and bottom 25 percent of the respondents were selected as low group and these two groups were considered as criterion groups. The ‘t’ values were calculated for each statement considering the total scores of these criterion groups. ‘t’

indicates the discriminating power of each statement between high and low groups. The critical ratio, that is the 't' value which is a measure of the extent to which a given statement differences between the high and low groups of respondents for each statement was calculated as per the standard procedures.

### **Selection of statements**

The 38 statements were arranged in descending order based on their 't' values. The statements whose 't' value is equal and more than 1.75 were selected for inclusion in the final scale. Thus a total of 30 statements constituted as the final scale with equal number of positive and negative statements.

### **Standardization of the scale**

#### **Content validity**

An attempt was made to ensure content validity through consultation with experts from ANGRAU, EEI, AED, NAARM and MANAGE from the very beginning of identifying the statements to the final selection of the statements on the basis of constructive comments by experts, the items were modified/eliminated. Thus the content validity was duly ensured.

#### **Reliability**

A scale is reliable when it consistently produces the same results when administered to the same respondents.

#### **Test-retest reliability**

Test-Retest method was followed to calculate reliability of the scale. In this method scale was administered to 30 respondents from non sample category of respondents twice at 15 days interval. The coefficient of reliability ( $r=0.8534$ ) was calculated based on the two

sets of scores obtained from the same respondents.

### **Measurement of perception**

Finally scale was administered to measure perception of farmers towards three extension service providers in three selected districts. The scores obtained by a respondent on perception were added up to get his total score. The possible score range was 30 to 90. Based on the total score of the respondents they were grouped into three following categories. The perception for each statement was analyzed by frequencies and percentages and then ranks were given to first ten statements according to the scores. Average score of all thirty statements for each extension service provider calculated and ranks given for simple comparison. Later by Analysis of Variance (ANOVA) of perception of farmers towards three extension service providers was compared.

S. No.	Score Range
1.	30-49
2.	50-69
3.	70-90

### **Results and Discussion**

#### **Distribution of farmers based on their perception towards extension service providers**

From the results (Table. 1) it was evident that majority of the farmers (39.1%) were distributed in the medium category followed by high (38.3%) and low (22.5%) category regarding their perception towards public extension service providers. Whereas 41 percent of the farmers were found to be in the medium category and rest of them equally distributed in low (29.1%) and high (29.1%) categories in respect of perception towards private extension service providers. Majority

of the farmers (58.3%) were found to be in the high category followed by medium (35.8%) and low (5.8%) category in respect of NGO extension service providers.

The reason behind this was majority of the farmers were agree with the given statements in respect to NGO followed by public extension service providers, whereas most of the farmers grouped in to medium category followed by high and low categories in respect to private extension service providers.

Chavai *et al* (2003) studied that the majority (64%) of the respondents were not in favor of private extension while 36 percent of the respondents were in favor of private extension services.

It is observed from the (Table. 2) findings that there was a significant difference in the perception of the farmers towards three extension service providers (public, private and NGO). The 'F' calculated value (16.80) shows that the perception of the farmers towards three extension service providers was significantly different.

Further, critical difference values indicated that farmers perception towards three extension service providers was significantly different from one another.

This might be due to the experience of the farmers vary in the process of getting the goods and services from these three extension service providers. So, farmer perceived differently about the extension service providers. In case of public extension service providers, farmers perceived positively as they were; providing credible and wide information on new technologies, assisting to develop positive attitude towards technologies, helping to improve agricultural production, visiting fields regularly, communicating technical advices in an easily

understandable way, improving knowledge and skill levels, conducting meetings and training programmes on genuine needs and finally accountable to the services.

While negative aspects of public extension services were; not accessible to all the farmers, extension functionaries not having proper infrastructural facilities, not distributing farm literature, not giving guidance on post harvest technologies, not giving market information, not organizing groups and no regular follow up actions.

Regarding private extension functionaries majority of the farmers perceived as advantages from the extension service providers were: delivering goods and services to the needy farmers in time and continuously, providing wide information on new technologies, communicating technical advices in an easily understandable way, having good infrastructural facilities, supplying credible information, giving guidance on post harvest technology while, they were not conducting field trips and study tours regularly, not giving guidance on Post Harvest Technologies (PHT), not distributing farm literature, not accessible to all the farmers, are not conducting exhibitions and rythusadassu regularly, not carrying out follow up actions regularly and technical advices are not feasible in all situations were few negative aspects as perceived by the farmers regarding private extension service providers. Chavai *et al* (2003) studied that 'Demonstrations on farmers fields' and 'visits to successful farmers from and outside the village' were other two methods of private extension services as perceived by 55.55 percent and 50 percent of the farmers respectively.

And at the same time that private sector extension is more concerned with serving the needs of larger, resource-rich farmers to the

exclusion of other farmers because of its interest in generating profits (Davidson and Ahmed, 2002). Most of the farmers perceived that NGO extension service providers were; giving more importance to organizing farmers groups, communicating technical advices in an easily understandable way, providing opportunities for skill development, delivering goods and services to the needy farmers in time only, conducting training programmes on the basis of genuine needs and problems of farmers, supplying credible information, assisting to develop positive attitude towards technologies, visiting fields regularly and providing wide information on new technologies and accountable to their services as major advantages of NGO

extension service providers. The other side of the services was; not conducting *rytusadassu*, *kisan melas* regularly and not giving elaborative market information to the farmers.

Andrew Kidd *et al* (1997) stated that the advantages of privatization are high quality of services in terms of satisfying information needs of clientele, trained manpower, and provides an information mix and choices available to farmers. Swanson (1996) elucidated that NGO's are becoming more involved (especially in the more difficult areas) and their strengths lie in community mobilization, awareness creation and group formation.

**Table.1** Distribution of Farmers (N=120) based on their perception towards Extension Service Providers (ESP)

S.No.	Category	Range	Public ESP		Private ESP		NGO ESP	
			F	%	F	%	F	%
1	Low	30 - 49	27	22.5	35	29.1	7	5.8
2	Medium	50 - 69	47	39.1	50	41.6	43	35.8
3	High	70 - 90	46	38.3	35	29.1	70	58.3
<b>Total</b>			120	100	120	100	120	100
<b>Mean</b>			63.4167		59.5333		69.5500	
<b>SE</b>			1.232157					
<b>CD at 0.05 level</b>			3.415366					

Experimental Mean: 64.2

**Table.2** Significant difference of farmers perception towards three extension service providers

S.No.	Source of Variation	Degrees of Freedom	Sum of Squares	Mean Squares	'F' Ratio
1	Replications	119	38708.7	325.2	1.79*
2	Treatments	2	6121.2	3060.6	16.80*
3	Error	238	43360.1	182.2	
	Total	359	88190.0		

\*Significant at 0.05 level of probability

The responses were enough to substantiate the farmers significant perceptual difference towards three extension service providers and

it can be concluded that, public extension service providers had more credibility in their advisory services than other two extension

service providers. Whereas private extension service providers were superior in delivering goods and services to the needy farmers in time only. NGO extension service providers were mostly concentrated on organizing groups and accountable to the services whatever they provide.

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