Knowledge Level of Farmers about Agricultural Extension Programmes in Krishna District of Andhra Pradesh

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ABSTRACT

The present study was conducted in Krishna district of Andhra Pradesh in order to find out the knowledge level of farmers about Agricultural Extension Programmes. Based on the programmes that were implemented in the study area, the programmes which had more number of the beneficiaries were selected viz., Farm Mechanization, National Food Security Mission (pulses) and Soil Testing Programme. Total 120 farmers were selected randomly as the beneficiaries for the study. The Ex-post-facto research design was used for the present investigation. It was found that majority (70.00%) of the beneficiaries had medium level of knowledge followed by high (20.00%) and low (10.00%) level of knowledge about the Agricultural Extension Programmes. The profile of the beneficiaries like age, farming experience, extension contact, social participation, socio-economic status, mass media exposure, training received and scientific orientation had positive and significant relationship with the knowledge of the beneficiaries on Agricultural Extension Programmes. Where as education, risk orientation and innovativeness were found to be positive and non-significant relationship and farm size was negative and non-significantly related with the knowledge of the beneficiaries.

Key words: *Agricultural Extension Programmes, Farm Mechanization, Knowledge, National Food Security Mission (pulses), Soil Testing Programme.*

In India two-third of the population depends upon agriculture as their livelihood. Indian economy is predominantly an agrarian economy and its prosperity depends upon the progress of agriculture. The cost of production is increasing day by day and as such agriculture is becoming an unprofitable business. To get more yields the farmers are investing more and more to carry out their agricultural operations and to purchase the costly machinery. The subsidy is usually given to remove some burden and is often considered to be in the interest of the people. Incentives and subsidies are considered to be the more powerful instrument for accelerating the growth of the agricultural production. During last two decades, agricultural subsidies in India have increased tremendously. The government has launched many subsidy based programmes to improve the agricultural productivity in the country like Seed Village Programme, National Food Security Mission (NSFM), Farm Mechanization and Soil Testing programme. Depending on the objectives of the programme launched seeds, machinery, fertilizers, pesticides, herbicides etc., are given to the farmers on subsidy basis. In some of the programmes these inputs are given according to social status of the farmers. These programmes play a vital role in facilitating development of indigenous production capabilities and in turn ensuring the required low cost food supplies on a sustained basis. As many farmers are utilizing and being benefited from these programmes, the present study was undertaken to study the knowledge level of farmers about the Agricultural Extension Programmes in Krishna district of Andhra Pradesh.

MATERIAL AND METHODS

The present study was undertaken in Krishna district of Andhra Pradesh during 2015 - 2016 by adopting ex-post-facto research design. Three mandals namely Bapulapadu, Chandarlapadu and Gudlavalleru which had more number of beneficiaries were selected purposively from the district. From each of the mandal four villages *viz.*, Ampapuram, Kodurupadu, Rangannagudem, and Veeravalli from Bapulapadu mandal. Chandarlapadu, Kandrapadu, Kodavalikallu, Muppalla from Chandarlapadu mandal. From

Gudlavalleru mandal Koutavaram, Kuchikayalapudi, Polimetla and Sherikalvapudi were selected randomly. Ten beneficiaries were selected randomly from each selected village thus making a total of 120 beneficiaries. The selected beneficiaries were personally interviewed with the help of pretested structured interview schedule. The data collected was coded, classified and tabulated in order to make the findings meaningful.

RESULTS AND DISCUSSION

The results obtained for the study undertaken was presented in the Table 1, 2, and 3. It was evident from the Table 1 that majority (70.00%) of the beneficiaries had medium knowledge followed by high (20.00%) and low (10.00%) levels of knowledge on Agricultural Extension Prorammes. The probable reason for this trend was the fact that majority of the beneficiaries belonged to middle and old age, they had regular contact with the extension agencies, attended trainings conducted by agricultural officials and acquired upto date information about the Agricultural Extension Programmes that were implemented in the study area. Similar findings were reported by Obaiah (2004).

From the Table 2 it was observed that around 75 to 100 per cent of the beneficiaries had correct knowledge about they knew Farm Mechanization Programme, the cost for the machinery in FMP has to be paid through mee-seva, knew about NFSM programme, the subsidy amount given for machinery under NFSM was Rs.10,000/-, average yield of pulses in the study

area, ideal time and implements for collection of soil samples.

Around 50 per cent to less than 75 per cent of the beneficiaries had proper knowledge on micronutrients provided under Soil Testing Programme, subsidy amount given to SC and general categories for machinery, the pulse crops that were covered under NFSM (pulses) programme, machinery could be selected on farmers choice, schemes covered under FMP, pulse varieties grown in study area, quantity of green manures given per acre and subsidy given for pulses/paddy seed.

The possible reason for possessing correct knowledge about these programmes might be that the beneficiaries in the study area were in regular contact with the extension agencies, attended to training programmes and moreover, they involved in scientific method of cultivation through the use of farm machinery which also added to their present levels of knowledge.

The beneficiaries around 25 per cent to less than 50 per cent had proper knowledge on selection points and ideal depth for soil sampling and minimum quantity of soil required for soil testing, subsidy for machinery given under women category, purpose of introducing NFSM (pulses) programme, the per cent of subsidy given on micronutrients, plant protection chemicals, seeds of pulses.

Less than 25 per cent of the beneficiaries had knowledge on quantity of micronutrients given per hectare, per cent of subsidy given for green manures, subsidy amount given for heavy machinery to group and individual farmers, the subsidy given

Table 1. Distribution of the beneficiaries according to their extent of knowledge.

(n=120)

S.No.	Category	Beneficiaries	
		Frequency	Percentage
1.	Low knowledge (<43.30)	12	10.00
2.	Medium knowledge (43.31-55.34)	84	70.00
3.	High knowledge (>55.34)	24	20.00
	Total	120	100

Mean = 49.32   SD = 6.02

Table 2. Content analysis of level of knowledge on Agricultural Extension Programmes.   **(n=120)**

S.No	Particulars	Knowledge Correct (%)	Incorrect (%)	Rank
1	Knew about Farm Mechanization Programme (FMP)	100.00	0	1
2	The cost for the machinery was paid through mee-seva	99.16	0.84	2
3	The farmer could select the machinery of his choice from the offered company	75.00	25.00	12
4	The schemes covered under Farm Mechanization Programme	74.16	25.84	13
5	For heavy machinery Rs.10 lakh of amount was given as subsidy to a group of farmers	15.83	84.16	28
6	For heavy machinery Rs.5 lakh of amount was given as subsidy for individual farmer	16.66	83.33	27
7	Period of free service for the machinery taken under FMP was one year	75.83	24.16	11
8	In FMP the 40 per cent subsidy was allocated to general category	65.00	35.00	17
9	In FMP the 50 per cent subsidy was allocated to women category	38.33	61.66	19
10	In FMP the 70 per cent subsidy was allocated to SC category	83.33	16.66	9
11	The amount of subsidy given for machinery under NFSM was Rs. 10,000/-	91.66	8.33	7
12	Knew about National Food Security Mission (pulses) programme	97.50	2.50	4
13	NFSM (pulses) programme was introduced to increased pulses production	30.00	70.00	23
14	The pulse crops grown under NFSM (pulses) programme were blackgram, greengram, redgram and bengalgram.	83.33	16.66	10
15	The subsidy given for pulses/paddy seed was 50 per cent	72.50	27.50	16
16	The subsidy given for micronutrient zinc and *T. viride* for seed treatment was 50 per cent.	15.00	85.00	29
17	The subsidy given for green manures like Daincha and Pillipesara was 50 per cent	24.16	75.83	26
18	The subsidy given for plant protection chemicals was 50 per cent	35.00	65.00	22
19	The pulses varieties cultivated under this programme were LBG-752, LBG-645, PU-31.	74.16	25.83	14
20	The quantity of black gram seed given for one acre (16kg).	29.16	70.83	24
21	The quantity of green manure seed given for one acre (12kg).	74.16	25.83	15
22	The average yield of pulses obtained (5-7qt)	95.00	5.00	5
23	Selection points in field for soil sampling	49.16	50.83	18
24	Ideal time for collection of soil samples (may month)	98.33	1.66	3
25	Minimum quantity of soil should be required for sample testing (1/2kg)	36.66	63.33	21
26	Ideal depth for soil sampling for different crops (1 feet)	37.50	62.50	20
27	Implements used for soil sampling (spade)	94.16	5.83	6
28	Frequency of soil testing done for same field having monocropping/ multicropping (3 years)	2.50	97.50	30
29	Micronutrients that were given under this programme (Zinc, Gypsum, Boron)	87.50	12.5	8
30	Quantity of zinc given per farmer per hectare (20kg)	25.00	75.00	25
31	Quantity of boron given per farmer per hectare (5kg)	1.66	98.33	32
32	Quantity of gypsum given per farmer per hectare (1t)	2.50	97.50	31

Table 3. Relationship between profile of the beneficiaries with their extent of Knowledge on Agricultural Extension Programmes.

(n=120)

S.No.	Independent variables	Correlation coefficient
1	Age	0.785**
2	Education	0.133 NS
3	Farm size	-0.132 NS
4	Farming experience	0.724**
5	Extension contact	0.544**
6	Social participation	0.203*
7	Socio-economic status	0.250**
8	Mass media exposure	0.479**
9	Training received	0.656**
10	Scientific orientation	0.499**
11	Risk orientation	0.133 NS
12	Innovativeness	0.142 NS

NS: Non-significant   *: Significant at 0.05 level of probability
**: Significant at 0.01 level of probability

Table 4. Multiple linear regression analysis of independent variables of the beneficiaries with their extent of knowledge on agricultural extension programmes.

(n=120)

S.No.	Independent variables	Regression coefficient	Standard error	t value
1	Age	2.647	0.465	5.698**
2	Education	-0.186	0.185	-1.006 NS
3	Landholding	-0.447	0.180	-2.487**
4	Farming experience	2.024	0.396	5.106**
5	Extension contact	0.485	0.174	2.785**
6	Social participation	-0.265	0.320	-0.828NS
7	Socio-economic status	0.017	0.106	0.156NS
8	Mass media exposure	0.193	0.116	1.661NS
9	Training received	1.281	0.367	3.491**
10	Scientific orientation	0.335	0.141	2.365*
11	Risk orientation	0.095	0.117	0.808NS
12	Innovativeness	0.111	0.094	1.180NS

F-VALUE =38.898 $R^2 = 0.814$
NS: Non-significant   *: Significant at 0.05 level of probability
**: Significant at 0.01 level of probability

for micronutrient zinc and *T. viridae* for seed treatment and frequency of soil testing.

This trend might be due to the fact that absence of the farmers while collecting soil samples in their fields. Unavailability of inputs at the time of peak season made farmers to purchase inputs from the dealers which resulted in inadequate knowledge on per cent of subsidy and quantity given on inputs and soil health management.

Table 3 revealed that Age, Farming experience, Extension contact, Socio-economic status, Mass media exposure, Training received and Scientific orientation of the beneficiaries showed a positive and significant relationship with knowledge of the beneficiaries about Agricultural Extension Programmes at 1 per cent level of significance and Social participation at 5 per cent level of significance.

Where as Education, Risk orientation and Innovativeness was positive and non-significantly related with the knowledge of the beneficiaries, while the Farm size had showed a negative and non-significant relationship with the knowledge of the beneficiaries on Agricultural Extension Programmes. These findings were in line with findings of Gopinath (2005) and Thiyagarajan (2011).

From the Table 4 it indicated that all the twelve independent variables taken together explained a significant amount of variation in the knowledge of the beneficiaries. This result revealed that all the twelve independent variables put together contributed for 81.40 per cent of variation in the knowledge of the beneficiaries on Agricultural Extension Programmes leaving the rest (18.60%) for extraneous effect of variables.

From the above table the MLR equation can be fit as

$Y = 38.898 + 2.647^{**}x_1 + -0.186x_2 + -0.447^{*}x_3 + 2.024^{**}x_4 + 0.485^{**}x_5 + -0.265x_6 + 0.017x_7 + 0.193x_8 + 1.281^{**}x_9 + 0.335^{*}x_{10} + 0.095x_{11} + 0.111x_{12}$.

Out of twelve variables, age, farming experience, extension contact, training received were found to be significant at 0.01 per cent level of probability. Whereas scientific orientation was found to be significant at 0.05 per cent level of probability. This means, age, farming experience,

extension contact, training received and scientific orientation were contributed significantly to the prediction of the knowledge of the beneficiaries about Agricultural Extension Programmes. Land holding also had significant relationship with the knowledge of beneficiaries but negatively.

CONCLUSION

It can be concluded that majority of the beneficiaries had medium level of knowledge on Agricultural Extension Programmes but more emphasize should be given for awareness among throughout the society and should increase the effective utilization of these programmes.

Information regarding quantity of micronutrients given per hectare, frequency of soil testing and subsidy given for heavy machinery to group and individual farmers was known to mare number of beneficiaries and hence more concentration of Agriculture Department is needed on these factors to increase the knowledge level of the beneficiaries.

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