



KNOWLEDGE OF FARMERS ON SOIL AND WATER CONSERVATION PRACTICES IN GROUNDNUT CULTIVATION

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ABSTRACT

The study conducted in Sira taluk of Tumkur district in Karnataka State, Result of the study revealed that majority of the groundnut farmers possessed partial knowledge on complex dryland farming practices. A vast majority (72 per cent) of the farmers had low/medium overall knowledge level on recommended soil & water conservation practices with respect to overall knowledge level majority (72 percent) of the groundnut farmers belong to low/medium knowledge level about soil and water conservation practices. Groundnut is the most important oilseed crop grown under dryland condition and it is known as the oilseed crop. The groundnut production in dryland areas can be achieved only through the adoption of improved soil and water conservation practices, which can be made possible only when farmers have perfect knowledge about soil and water conservation practices of groundnut. With this background the present study was undertaken with the following objectives. To measure the knowledge level of groundnut farmers with regard to soil and water conservation practices and To find out the extent of relationship between the personal, socio-psychological characteristics of groundnut farmers and their knowledge level.

KEY WORDS: water conservation, oil seed crop, relationship, farmer.

METHODOLOGY

The study was conducted in Sira taluk of Tumkur district in Karnataka state. Out of 36 Grama Panchayaths, five Grama Panchayaths having maximum area under groundnut cultivation were selected for the study. From each Grama Panchayaths two villages having highest area under groundnut were selected. From each village ten groundnut farmers were selected randomly. Thus, the total sample for the study was 100 farmers.

Knowledge - Level

To quantify the respondents knowledge level (dependent variable) of the recommended soil and water conservation practices as well as general cultivation practices a simple teacher made test was used. For the purpose of the study, a list of 26 soil and water conserving practices covering all aspects of cultivation of groundnut were prepared and presented to the respondents. Based on the response obtained, a score of 2, 1 and 0 were assigned to 'full' 'partial' and 'no' response, respectively. The total score for each respondent was computed by summing up the number of item answered by an individual respondent. Later the respondents were grouped into high, medium and low knowledge categories based on mean (41.17) and half standard deviation (1.67) as a measure of check.

Knowledge category score

High ($\bar{X}+1/2$ S.D)
Medium ($\bar{X}+1/2$ S.D)
Low ($\bar{X}-1/2$ S.D)

More than 43.3
Between 43.39 to 40.04
Less than 40.04

The information about personal and socio-psychological characteristics (ten independent variables) was collected with the help of a structured schedule and suitable scales (Byra Reddy, 1976)

Simple correlation test was used to find out the nature of relationship between dependent variable (knowledge level) and independent variables (personal and socio-psychological characteristics).

RESULTS AND DISCUSSION

Specific Knowledge of Farmers on the Individual soil and water conservation practices in Groundnut Cultivation.

The results of the study with respect to specific knowledge about soil and water conservation practices in groundnut cultivation practiced by farmers Table revealed that cent per cent of the groundnut farmers had correct knowledge about the practices like contour bunding, ploughing and sowing across the slope, seed rate, spacing, mixed cropping of groundnut + redgram proportion of groundnut+ redgram, weeding within 45 days after sowing, FYM application. This trend Indicate that the practices which are simple, easy to remember, involve low cost and less difficulty are known to the farmers.

It is also evident that majority of the farmers were aware of the practice like graded bunds, vegetative bunds, fall ploughing, deep tillage, use of kolar mould plough, use of improved varieties and chemical seed treatment.

TABLE -1. Specific Knowledge of farmers on the Individual soil and water conservation Practices in Groundnut Cultivation.

(n=100)

Sl.No	Specific Dry Farming Practices	Knowledge of Farmers					
		Correct Response		Portial Response		No Response	
		No	%	No	%	No	%
1	Contour bunding	100	100	-	-	-	-
2	Graded bunds	86	86	14	14	-	-
3	Graded borderstrips	22	22	71	71	7	7
4	Vegetative bunds	99	99	1	1	-	-
5	Fall ploughing	84	84	16	16	-	-
6	Deep tillage	85	85	15	15	-	-
7	Ploughing and sowing across the slope	100	100	-	-	-	-
8	Constuction of small section bunds at 10 meters interval	3	3	97	97	-	-
9	Land smoothening and leveling between two bunds	3	3	97	97	-	-
10	Opening dead furrows at 3 meters interval	3	3	90	90	7	7
11	Use of kolar mould plough						
11	Use of ridger and leveler	70	70	30	30	-	-
12	Use of seed cum fertilizer drill	6	6	92	92	2	2
13	Farm ponds	30	30	70	70	-	-
14	Use of improved varieties	31	31	69	69	-	-
15	Seed rate	90	90	10	10	-	-
16	Spacing	100	100	-	-	-	-
17	Mixed cropping of groundnut	100	100	-	-	-	-
18	Recommended Proportion	100	100	-	-	-	-
19	Weeding within 45 days after sowing	100	100	-	-	-	-
20	FYM application before sowing	100	100	-	-	-	-
21	Gypsum application	100	100	-	-	-	-
22	Rhizobium treatment	100	100	-	-	-	-
23	Fertilizer application	43	43	-	55	2	2
24	Chemical seed treatment	24	24	55	76	-	-
25	Pests and diseases	56	56	76	44	-	-
26		50	50	44	50	-	-

Only half of the farmers had correct knowledge on pests and diseases. Further, majority of the farmers possessed partial knowledge regarding the practices like, graded border strips, construction of small section bunds, land smoothening and leveling between two bunds, opening dead furrows, use of ridger and leveler, use of seed-cum-fertilizer drill, farm ponds, rhizobium treatment and fertilizer application. This might be due to the reason that the farmers might not have been educated on these aspects.

Some of the practices like graded border strips, small section bunds, land smoothening and leveling, dead furrows, rhizobium treatment and fertilizer application are complex and more technical in nature and are not easy to remember. Further, some of the practices including improved implements were not known to the farmers, because, construction of contour bund is agricultural departments work and farmers whose lands were covered by such activities alone be knew of such practices. The reason for partial knowledge about seed-cum-fertilizer drill might be that the implement is not being used by the

farmers in the area. The above findings are in conformity with the study of Patil et al. (1989).

Overall Knowledge Level of Farmers on the soil and water conservation Practices in Groundnut Cultivation.

It was found out that a majority (72 percent) of the groundnut farmers belong to low/medium knowledge level about soil and water conservation Practices. The possible reason for this kind of finding is due to non-understanding of the complex dryland practices by the groundnut farmers.

Relationship between the Knowledge Level and Personal and Socio-psychological characteristics of Groundnut Farmers.

Economic motivation, scientific orientation and extension participation of farmers had significant relationship with the knowledge level on dryland farming practices at 5 percent level. The other five variables had non-significant relationship. Economic motivation is the individual's motivation to attain profit. To attain profit the farmers should know about latest cultivation practices. Thus, economic motivation among farmers acts as a initiating

TABLE-2.Relationship between the Knowledge Level and Personal and Socio-Psychological Characteristics of Groundnut Farmers

Sl No	Personal and Socio-Psychological Characteristics	Correlation Co-efficient ®
1	Age	0.0095
2	Education	0.0200
3	Sources of information	0.1464
4	Economic motivation	0.2936*
5	Risk preference	0.1560
6	Scientific orientation	0.3301*
7	Mass media use	0.1245
8	Extension participation	0.2773*

*= Significant at 5% level

Factor for acquiring knowledge about recommended soil and water conservation technologies. Farmers with high scientific orientation are more responsive to the latest technologies and acquire more knowledge about the soil and water conservation cultivation aspects. Similar findings were observed by Basavaprabhu (1996). Participation in extension activities like demonstrations, field visits, tours, field day, Krishimelas ect., promotes the acquisition of knowledge about improved soil and water conservation practices.

CONCLUSION

The groundnut farmers possess partial knowledge on some of the soil and water conservation practices like graded border strips, small section bunds, land smoothing and leveling between two bunds, opening dead furrows et.. In this line, the extension efforts should be directed to educate so as increase the knowledge leading to the adoption of such practices by the farmers.

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