

Constraints Faced by Farmers in Adoption of Scientific *Kharif* Groundnut Production Technologies

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ABSTRACT

Groundnut is the most important crop among the oilseed crops grown in the country. Groundnut is considered as the world's fourth largest source of edible oil and third most important source of vegetable protein. It is also a major oilseed legume crop in India and meets about 30 per cent of the edible oil requirements in the country. Present study was conducted in Junagadh and Rajkot districts of Gujarat state to identify the constraints in adoption of kharif groundnut production technology. 120 respondents were selected from 8 randomly selected villages of Vanthli, Visavadar, Gondal and Jasdan talukas of two districts. The data were collected through interview schedule. Results indicates that lack of well established infrastructure of soil testing laboratory (2.66), high cost of tillage operation (2.87), poor quality of seed (2.75), shortage of F.Y.M (2.70), high cost of fertilizer (2.28), lack of knowledge about micro nutrients (2.77), irregularity of sowing due to uncertainty of rainfall (2.33), difficulty of interculturing at appropriate time (2.35), high wages of labour (3.00), insufficient water for irrigation (2.91), more incidences of insect (2.90), pest and diseases and non availability of adequate labour in time (2.94) were major constraints faces by kharif groundnut grower in scientific kharif groundnut production technology.

Keywords : *Groundnut production technology, Constraints, Impediments*

INTRODUCTION

Oilseed crops have been backbone of agricultural economy of India from time to time immemorial. Oilseed is an account for one ninth of the total agricultural production in India and rank next to food grains. Groundnut (*Arachis hypogaea.*), is the most important crop among the oilseed crops grown in the country. It is important not only from the point of view of its contribution of the national agricultural production, but also because of its industrial use. Groundnut is expected to harvest recorded groundnut crop of 25.95 lakh tonnes and reported acreage of 16.6 lakh hectares during 2013-2014 (Anonymous 2013). The groundnut is a principal crop of the Saurashtra, The principal groundnut growing district in Saurashtra are Rajkot, Junagadh, Jamnagar, Porbandar, Bhavnagar and Surendranagar. Majority of the farmers in the area has undertaken the cultivation of groundnut since a very long time. However it is observed that recommended groundnut production technology is not adopted by the farmers up to the extent for higher production due to some constraints. Therefore, study was conducted to identify the

constraints faced by the farmers in adoption of recommended groundnut production technologies.

OBJECTIVE

To study the constraints faced by groundnut growers in adoption of scientific groundnut production technologies

METHODOLOGY

A sample of 120 farmers representing from eight villages of four talukas viz. Vanthli, Visavadar from Junagadh district and Gondal and Jasdan from Rajkot district of South Saurashtra agro climatic zone of Gujarat state was drawn randomly. The data of this study were collected with the help of structural interview schedule. The ex-post-facto research design was used for the study. For ascertaining the constraints faced by the respondents in adoption of recommended practices of *kharif* groundnut an explorative study was made. At first of a large number of statements of groundnut production constraint were collected by reviewing the literature related to groundnut production

viz.; books, reference journals, bulletins and other printed materials. The response of the farmers were taken for each constraint whether it is relevant or not by put tick (✓) mark. Further relevant constraints were again tick marked (✓) on three point continuum viz. Most important, Important and Less important having the weightage of 3, 2, 1 respectively.

After collect the responses from all the respondents (kharif groundnut grower), the total scores of each constraint were summed up. It was divided by total number of respondents to find out the mean score of each constraint. On the basis of mean score of each constraint, the ranks were assigned to all the constraints accordingly to each subhead.

RESULTS AND DISCUSSION

Table 1: Constraints faced by the respondents in adoption of recommended practices of kharif groundnut

n=120

Sr. No	Constraints	Mean sore	Rank
I Soil testing and characterization of soil			
1	Lack of knowledge about soil testing / analysis	2.33	II
2	Lack of well established infrastructure of soil testing laboratory	2.66	I
3	Soil testing report is not receiving in time	2.12	III
4	Low water holding capacity of soil	1.87	IV
5	Low fertility status of the soil	1.54	V
II Tillage			
1	Lack of knowledge regarding tillage recommendation	2.16	III
2	Non – availability of improved tillage equipment	1.83	V
3	High cost of tillage operation	2.87	I
4	Maintenance of bullocks is costly	2.41	II
III Improved Variety			
1	Lack of knowledge about improved variety	1.60	V
2	Difficulty in getting improved seed	2.41	II
3	High cost of seed	2.12	III
4	Lack of short duration variety	1.75	IV
5	Poor quality of seed	2.75	I
IV Manure			
1	Lack of knowledge regarding making good quality of F.Y.M	2.50	II
2	Shortage of F.Y.M	2.70	I
3	Weed infestation due to use of F.Y.M	1.93	IV
4	High cost of F.Y.M	2.16	III
V Chemical fertilizers			
1	Lack of knowledge about recommended doses of fertilizers	1.62	V
2	Non availability of fertilizer in time	1.95	IV
3	High cost of fertilizers	2.28	III
4	Lack of knowledge about micro nutrients	2.77	I
5	Lack of knowledge about bio – fertilizer and its uses	2.55	II
VI Sowing			
1	Lack of knowledge about recommended sowing distance	1.81	III
2	Lack of knowledge about recommended seed rate	2.12	II
3	Irregularity of sowing due to uncertainty of rainfall	2.33	I
VII Interculturing			
1	Lack of knowledge about recommendation of interculturing	1.94	II
2	Lack of improved interculturing implement	1.66	III
3	Difficulty of interculturing at appropriate time	2.35	I
VIII Weed management			
1	Problem of heavy and continuous rainfall	1.85	V
2	Problem of labour scarcity	2.83	II
3	High wages of labour	3.00	I

Sr. No	Constraints	Mean score	Rank
4	Lack of knowledge about use and rate of herbicides	2.08	IV
5	High rate / price of herbicides	2.66	III
IX	Irrigation		
1	Lack of knowledge about irrigation at critical stages of crop	2.45	III
2	Lack of knowledge regarding moisture conservation practices	2.04	IV
3	Insufficient water for irrigation	2.91	I
4	Insufficient electric power supply	1.79	V
5	Non – availability of canal water at appropriate time	2.79	II
X	Plant protection		
1	Lack of knowledge regarding seed treatment	1.70	V
2	Lack of knowledge about proper diagnosis of disease / pest	2.04	IV
3	Lack of knowledge regarding recommended dose of insecticide /pesticide application	2.62	II
4	High cost of insecticide /pesticide	2.20	III
5	Lack of effective bio-pesticide	1.50	VI
6	More incidence of insects, pest and disease	2.9	I
XI	Harvesting and Threshing		
1	Non availability of adequate labour in time	2.94	I
2	Lack of varieties having high peg strength	2.89	II
3	Damage to groundnut pod due to use of opener / thresher	2.54	III

It is observed from Table 1 that lack of well established infrastructure of soil testing laboratory (2.66), lack of knowledge about soil testing analysis (2.33), soil testing report is not received in time (2.12), low water holding capacity of soil (1.87) and fertility status of the soil (1.54) were their major Soil testing and characterization of soil related constraints. High cost of tillage operations (2.87), maintenance of bullock is costly (2.41), lack of knowledge regarding tillage recommendations (2.16) and non availability of improved tillage equipment (1.83) were major constraints of tillage practices.

Poor quality of seed (2.75), difficulty in getting of improved seed (2.41), high cost of seed (2.12), lack of short duration varieties (1.75) and lack of knowledge about improved varieties (1.60) were major variety related constraints as perceived by the groundnut growers.

In case of manure, major constraints were; shortage of FYM (2.70), lack of knowledge regarding making good quality of FYM (2.50), high cost of FYM (2.16) and weed infestation due to use of FYM (1.93). Whereas, major chemical fertilizer related constraints were; lack of knowledge about micro-nutrients (2.77), lack of knowledge about bio-fertilizers and its uses (2.55), high cost of fertilizers (2.28), non availability of fertilizer in time (1.95) and lack of knowledge about recommended doses of fertilizers (1.62).

Irregularity of sowing due to uncertainty of rainfall (2.33), lack of knowledge about recommended seed rate (2.12)

and lack of knowledge about recommended sowing distance (1.81) were major sowing practices related constraints as perceived by the groundnut growers.

The constraints faced by groundnut growers in interculturing practices were difficulty of interculturing at appropriate time (2.35), lack of knowledge about recommended of interculturing (1.94) and lack of improved interculturing implements (1.66). Constraints were observed in weed management practice like high wages of labour (3.00), problem of labour scarcity (2.83), high rate of herbicides (2.66), Lack of knowledge regarding the use of herbicides (2.08) and problem of heavy and continuous rainfall (1.85) as perceived by the groundnut growers. These all constraints secure more than 50 per cent weightage score.

It can be clearly indicated that the insufficient water for irrigation (2.91), non availability of canal water at appropriate time (2.79), lack of knowledge about irrigation at critical stages of crop (2.45), lack of knowledge regarding moisture conservation practices (2.04) and insufficient electric power supply (1.79) were major constraints expressed by the groundnut growers in irrigation practices.

With regards to plant protection, the difficulties faced by the groundnut growers were more incidence of insects, pests and diseases (2.90), lack of knowledge regarding recommended doses of insecticides/pesticides (2.62), high cost of insecticides/pesticides (2.20), lack of knowledge about proper diagnosis of diseases/pests (2.04),

lack of knowledge regarding seed treatment (1.70) and lack of effective bio-pesticides (1.50) in descending order. Considering the last practice of groundnut cultivation, harvesting and threshing, total number of three constraints faced by the groundnut production were non availability of adequate labour in time (2.94), lack of varieties having high peg strength (2.89) and damage to groundnut crop due to use of opener/thresher (2.54) as perceived by the groundnut growers.

CONCLUSION

It can be concluded that major constraints observe by the farmer in *kharif* groundnut cultivation were lack of well established infrastructure of soil testing laboratory, high cost of tillage operation, poor quality of seed, shortage of F.Y.M, high cost of fertilizer, lack of knowledge about micro nutrients, irregularity of sowing due to uncertainty of rainfall, difficulty of interculturing at appropriate time, high wages of labour, insufficient water for irrigation, more incidences of insect, pest and diseases and non availability of adequate labour in time.

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