

## Constraints Encountered by Groundnut Growers in Groundnut Pigeonpea Inter Relay-Cropping System

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### ABSTRACT

*The present study was conducted in South Saurashtra agro climatic zone of Gujarat state. To identify the technological gaps in adoption of groundnut pigeon-pea inter relay cropping production technology with the ex-post-facto research design was used. The size of the sample was 120 respondents which were purposively selected from four villages namely Motimarad and Pipliya from Dhorajitaluka of Rajkot district, and Datrana, Nagalpur from Mendradataluka of Junagadh district. The studies highlight that there are number of constraints which affect the process of adoption reversely, specially the extents of groundnut-pigeon pea inter-relay cropping system. The constraints faced by the respondents were, non-remunerative price of product followed by scarcity of labour at harvest time, heavy infestation of diseases & pests, lack of knowledge about the recommended doses of fungicides/pesticides, high price of chemical fertilizers. Whereas, remunerative price of the product should be made available followed by effective insect-pest control methods should be developed, quality seed supply should be ensured, input should be supplied at subsidized rate were offered suggestion by the respondents.*

*Keywords : Groundnut growers, Inter relay cropping sequence, Constraints*

### INTRODUCTION

A non-traditional crop of pigeonpea in a suitable and efficient groundnut-pigeon pea inter-relay cropping system has been successfully introduced through Front Line Demonstrations. In this system, as completion of intercultural operation in groundnut the relay *arhar* (Pigeonpea) is sown between the groundnut rows in August (60 to 65 days after sowing of groundnut) having three and four feet distance between rows. This cropping system is becoming more popular in the farming community of the region as it covers the risk of groundnut in abnormal monsoon years as well as it does not reduce area and production of groundnut. The area under inter-relay groundnut-pigeon pea is extended within a short span and going to increase day by day in the region. Even though the severe drought condition occurs frequently in Saurashtra region, the farmers prefer to sow pigeonpea on large scale to avoid the risk from single sole crop of groundnut. Even with these circumstances, the productivity of this crop is not satisfactory. This may be because farmers are not adopting the recommended technologies in an appropriate way. Keeping this in view, the present investigation is made

to know and understand the constraints as perceived by farmers in groundnut pigeonpea inter relay-cropping system.

### METHODOLOGY

Saurashtra is a main groundnut bowl of the country. The study was undertaken in South Saurashtra agro climatic zone of Gujarat state with ex-post facto research design. The South Saurashtra agro climatic Zone is consisted of 25 talukas of four districts of the state having common agro-climatic conditions. Out of four districts, Rajkot and Junagadh were selected purposively, where the groundnut-pigeonpea inter-relay cropping system has already been adopted by the farmers/demonstrations organized by the Pulse Research Station, Junagadh. From the two districts, one taluka from each district was selected for the study. From each selected taluka, two villages Motimarad and Pipliya from Dhorajitaluka of Rajkot district, and Datrana, Nagalpur from Mendradataluka of Junagadh district were selected by random sampling method. Thus, the total numbers of four villages were selected for the study. Total numbers of 120 farmers, 30 farmers from each selected village were selected by using purposive random sampling technique with a condition that the farmers have

adopted this cropping system at least since last two years. The data were collected through specially developed interview schedules.

To understand and overcome the constraints while developing strategies for enhancing higher yield as well as to increase the area under this cropping system, this effort was made. The respondents were requested to express the constraints faced by them in groundnut pigeon pea inter relay crop cultivation. The constraints were kept open to find out difficulties faced by the respondents. The general constraints regarding groundnut pigeon pea inter relay crop cultivation as opined by the respondents was collected and the percentage were worked out for each constraint. The constraints

were ranked based on percentage.

## RESULTS AND DISCUSSION

### Constraints experienced by the respondents in groundnut pigeonpea inter relay-cropping system

The benefit of a technology is actually derived only when it is efficiently utilized by farmers in their local situation. The farmers are very much eager to get maximum benefits from the agricultural technology. However, many of them could not do so, because of a large adoption gap, culminating in low yield of groundnut pigeon pea inter relay crop in the area.

**Table 1 : Constraints experienced by the respondents in Groundnut Pigeonpea inter relay cropping system n = 120**

Sr. No.	Constraints	No.	Per cent	Rank
1	High price of improved seeds	59	49.16	XIV
2	Ineffectiveness of available chemicals for control the diseases and insects /pests	85	70.83	VI
3	Lack of storage facilities of groundnut	58	48.33	XV
4	Heavy infestation of diseases & pests	95	79.16	III
5	Difficulty to harvest the groundnut crop in relay crop system.	54	45.00	XVII
6	High price of insecticides/ pesticides & fungicides	75	62.50	VII
7	Non-availability of good quality FYM	63	52.50	X
8	High price of chemical fertilizers	90	75.00	V
9	Non- availability of irrigated water at important growth stages of pigeon pea	60	50.00	XII
10	Lack of knowledge to diagnose the proper pests and diseases in the crop.	59	49.16	XIII
11	Lack of knowledge about the recommended doses of fungicides/ pesticides	92	76.66	IV
12	Lack of knowledge about the recommended methods to control diseases and pests	62	51.66	XI
13	Fear of reduction in the yield of groundnut Pigeonpea in relay system as compared to sole groundnut crop.	55	45.83	XVI
14	Scarcity of labour at harvest time	98	81.66	II
15	Irregular visit of Village level workers	70	58.33	VIII
16	Inefficiency/inability of extension worker to solve the problems of the cropping system	65	54.16	IX
17	Lack of training on improved technologies	50	41.66	XVIII
18	Insufficient demonstration of improved technologies on farmers' field.	40	33.33	XIX
19	Non-availability of finance in time	35	29.16	XX
20	Non- remunerative price of product	120	100.00	I

It is obvious from the Table 1 that the constraints faced by the respondents were, non-remunerative price of product followed by scarcity of labour at harvest time, heavy infestation of diseases & pests, lack of knowledge about the recommended doses of fungicides/pesticides, high price of chemical fertilizers and ineffectiveness of available chemicals for control the diseases and insects / pests got first, second, third, fourth, fifth and sixth ranked, respectively.

**Suggestions offered by the respondents to overcome the constraints**

**Table 2 : Suggestions of the groundnut Pigion pea inter relay crop growers to overcome the constraints in groundnut Pigion pea inter relay cropping system**  
n = 120

Sr. No.	Suggestions	No.	Per cent	Rank
1	Timely and quality seed supply should be ensured.	80	66.67	III
2	Effective insect-pest control methods should be developed.	85	70.83	II
3	Input should be supplied at subsidized rate.	60	50.00	IV
4	Remunerative price of the product should be made available.	120	100.00	I
5	More number of training programmes should be organized for the farmers in relation to this cropping system.	51	42.50	V
6	More numbers of Demonstrations on new technologies should be arranged farmers' fields.	15	12.50	VIII
7	Village level workers should frequently contact the farmers to make them aware about new technologies.	45	37.50	VII
8	Crop insurance should be made available for all the farmers.	50	41.67	VI
9	Effective technology for harvesting the groundnut Pigionpea crop should be developed.	10	8.33	IX

The suggestions offered by of respondents were; remunerative price of the product should be made available followed by effective insect-pest control methods should be developed, quality seed supply should be ensured, input should be supplied at subsidized rate, more number of training programme should be organized farmers in relation to this system and crop insurance should be made available for all the farmers got first, second, third, fourth, fifth and sixth

ranked, respectively.

It is clear from the suggestions made by the most of the farmers that these suggestions are based on the facilities that they have availed but are not satisfied to the extent of their expectation. Thus, it also could be inferred from the facts mentioned about that the facilities to the growers already being provided by the various Government Agencies need be strengthened and tailored according to the requirement of groundnut pigeon pea inter relay crop growers.

**CONCLUSION**

It can be concluded that constraints faced by the respondents were, non-remunerative price of product followed by scarcity of labour at harvest time, heavy infestation of diseases & pests, lack of knowledge about the recommended doses of fungicides/pesticides, whereas suggestion made by respondents were remunerative price of the product should be made available followed by effective insect-pest control methods should be developed. For effective transfer of technology support, it is suggested to organize more number of crop demonstrations. At least one demonstration should be conducted in a village. The regular visit of village level workers need be strengthened and to raise their technical competency, especially in the field where farmers have very great problems.

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