

ADOPTION OF CRISIS MANAGEMENT IN GROUNDNUT CROP BY GROUNDNUT GROWERS OF SOUTH SAURASHTRA AGRO-CLIMATIC ZONE

M.K. Jadeja¹, P.R. Kanani² and K.M. Jadeja³

1 Assistant Extension Educationist, Office of Directorate of Extn. Education, JAU, Junagadh - 362001

2 Asso. Director of Ext. Education, Office of Directorate of Extn. Education, JAU, Junagadh - 362001

3 M.Sc. Student, Department of Extension Education, JAU, Junagadh - 362001

Email : mkjadeja@yahoo.co.in

ABSTRACT

Gujarat is the leading groundnut of the country. With various crises involved in the cultivation of groundnut crop, there are chances to face miserable situations which can be managed effectively. To draw out certain inferences about adoption of crisis management practices in groundnut by groundnut growers this study was conducted in south Saurashtra agro-climatic zone of Gujarat. A total of 200 groundnut growers were interviewed with the help of developed crisis management index for various recommended crisis management practices. The data obtained through interview schedule were processed, tabulated, classified and analyzed. The result of the study indicated that majority (72.50 per cent) of the respondents were from medium adoption group followed by low (18.50 per cent) and high (9.00 per cent) adoption group. A high adoption was observed in case of seed selection, timely fertilizer application and timely harvesting and storage. But comparatively less adoption was observed with plant protection aspects. This can be mitigated by line departments in co-ordination with SAU's by developing and disseminating effective plant protection technology that can be transferred to farmers through more number of demonstrations to raise the technical competency.

Keywords: crisis management, groundnut crop growers, adoption

INTRODUCTION

The principal groundnut growing states in India are Gujarat, Andhra Pradesh, Karnataka, Tamil Nadu and Maharashtra, which account for more than 85 per cent of the Indian production as well as an area. Gujarat is the leading groundnut producer, the state alone accounted for 32 per cent of area and 38 per cent of groundnut production of the entire country during 2011-12. Groundnut is a major crop grown since 1910 in the Saurashtra region of the Gujarat State. It is grown on 1.63 million ha of land with annual production 1.69 million tons in year. It is experienced that if proper care is not taken to manage various crises involved in the cultivation of groundnut crop in terms of natural problems of insects-pests, diseases, climate change and other input related problems, there are chances to face miserable situations. The adoption of crisis management practices is understood as one of the prerequisites in the cultivation of groundnut crop for higher yield of good quality. The crisis is a situation or an event that confronts decision makers with an opportunity for response, either action or inaction, (Bernard, 1938). Crisis management is the systematic attempt to avoid personal or organization

crisis or to manage those crisis events that do occur. It is to draw out certain inferences about adoption of crisis management practices in groundnut by groundnut growers. With this task in view a study was conducted with the objectives to know the extent of adoption of crisis management in groundnut cultivation by groundnut growers and to ascertain association between profiles of the groundnut growers and their level of adoption of crisis management practices in the Junagadh and Rajkot districts of South Saurashtra region

OBJECTIVE

To know the adoption of crisis management in groundnut crop by groundnut growers of south saurashtra agro-climatic zone

METHODOLOGY

A random sampling procedure was followed for the selection of the respondents and accordingly 20 groundnut growers from each of the selected villages were selected as respondents. Ultimately, a total of 200 groundnut growers were selected for the study. The head of the family i.e. major

decision maker was considered as respondent for the study. The developed crisis management index of crisis management practices was distributed among the groundnut growers, the responses on three point rating scale was quantified. The data obtained through interview schedule were processed, tabulated, classified and analyzed in light of objectives.

RESULTS AND DISCUSSION

The data in Table 1 showed that majority (72.50 per cent) of the respondents were from medium adoption group followed by low (18.50 per cent) and high (9.00 per cent) adoption group. It can be concluded that majority of the farmers had adopted the crisis management practices of groundnut cultivation up to medium extent. This might be due to fact that the groundnut growers were from medium extension participation, medium social participation and medium knowledge about crisis management practices.

Table 1: Distribution of respondents according to their extent of adoption of crisis management practices n=200

Sr. No.	Category	Number	Percent
1	Low level of adoption (up to 59.44 score)	37	18.50
2	Medium level of adoption (59.45 to 77.10 score)	145	72.50
3	High level of adoption (above 77.10 score)	18	09.00
$\bar{X} = 68.27$		S.D. = 8.83	

Table 3: Distribution of respondents according to adoption of sowing related crisis management practices n=200

Sr. No.	Practices	Expert score	Adoption score	Percent	Rank
1	To follow appropriate distance between two lines and two plants.	0.88	0.71	80.68	III
2	To follow proper depth of sowing.	0.92	0.82	89.13	I
3	To adopt recommended seed rate.	1.54	1.26	81.82	II
4	To adopt recommended seed treatment at sowing time.	1.82	1.02	56.04	IV
5	To follow pre monsoon sowing for good harvesting of groundnut crop.	1.32	0.68	51.52	V
6	To fill up gaps in crop.	0.96	0.26	27.08	VI

The respondents also adopted different crisis management practices viz., adoption of recommended seed treatment at sowing time (56.04 per cent), adoption of pre-monsoon sowing for good harvesting of groundnut crop (51.52 per cent) and to fill up gaps in crop (27.08 per cent) with rank fourth, fifth and sixth, respectively.

It is concluded that the crisis management practices

Further adoption of crisis management practices by the groundnut growers was observed in the practices viz., soil testing, sowing, fertilizer management, crop protection, interculturing and harvesting and storage. The data presented in Table 2 clearly indicated that the groundnut growers adopted the crisis management practices related to soil testing parameters viz. adoption of soil testing for nutrient management (11.57 per cent), to follow soil testing report for less expenses on fertilizers applying the required nutrients for crop growth (7.69 per cent) with rank first and second, respectively.

Table 2: Distribution of respondents according to adoption of soil testing related crisis management practices n=200

Sr. No.	Practices	Expert score	Adoption score	Percent	Rank
1	To adopt soil testing for nutrient management.	1.21	0.14	11.57	I
2	To follow soil testing report for less expenses on fertilizer.	1.43	0.11	7.69	II

The data in Table 3 reveals that the crisis management practices related to sowing parameters adopted by the groundnut growers were; to follow proper depth of sowing (89.13 per cent), adoption of recommended seed rate (81.82 per cent) and to follow appropriate distance between two lines (80.68 per cent) with rank first, second and third, respectively.

viz., adoption of proper depth of sowing and seed rate as well as adoption of proper distance between two lines were adopted up to high extent by the groundnut growers. The examination of the data presented in Table 4 showed that the crisis management practices viz., timely application of proper dose of fertilizers (78.81 per cent), application of *mouram* (*Tanch*) in soil (59.81 per cent), adoption of recommended

dose of micro-nutrients (46.83 per cent), application of sulphur fertilizers during proper moist condition in soil (42.66 per cent) and application of recommended dose of fertilizers (29.78 per cent) were adopted by the groundnut growers in descending order with rank first, second, third, fourth, and fifth, respectively.

Table 4: Distribution of respondents according to adoption of fertilizer related crisis management practices n=200

Sr. No.	Practices	Expert score	Adoption score	Percent	Rank
1	To adopt recommended dose of fertilizers.	1.78	0.53	29.78	V
2	Timely application of proper dose of fertilizers.	1.18	0.93	78.81	I
3	To apply sulphur fertilizers during proper moist condition in soil.	1.43	0.61	42.66	IV
4	To adopt recommended dose of micro-nutrients.	0.84	0.39	46.43	III
5	To apply Mouram (Tanch) in soil.	3.16	1.89	59.81	II

It can be concluded that the practice of timely application of fertilizers were adopted by majority of the respondents. This indicated that groundnut growers were well aware about the importance of timely application of proper dose of fertilizers, which led to higher production of the groundnut crop. Groundnut is more susceptible to insects and pests as the damage by it significantly decrease

yield in groundnut crop. Hence, it is worthwhile to take plant protection measures timely which increase the production of groundnut per unit. Thus, crisis management of plant protection measures in groundnut is very important. In this regard, groundnut growers we asked about adoption of the crisis in related with plant protection practices in groundnut cultivation.

Table 5: Distribution of respondents according to adoption of plant protection related crisis management-practices n=200

Sr. No.	Practices	Expert score	Adoption score	Per cent	Rank
1	To save the crop from sucking pest like aphid, thrips and jassids	1.23	0.91	73.98	III
2	To use recommended doses and proper quantity of pesticides /fungicides.	1.42	0.72	50.70	VII
3	To adopt proper method of application of pesticides/ fungicides.	1.03	0.82	79.61	I
4	To save crop from larval infestation.	1.86	1.41	75.81	II
5	To use proper pesticides /fungicides.	1.56	0.91	58.33	VI
6	To save crop from root rot and stem rot.	1.23	0.56	45.53	VIII
7	For timely application of pesticides/ fungicides.	1.09	078	71.56	V
8	To save crop from tikka and rust.	1.62	1.16	71.60	IV

The data presented in Table 5 showed that the groundnut growers adopted the crisis management practices related to plant protection parameters were; adoption of proper method of application of pesticides or fungicides (79.61 per cent), practices to save crop from larval infestation (75.81 per cent), to save the crop from sucking pest like aphid, thrips and jassids (73.98 per cent) and to save crop from tikka and rust (71.60 per cent) with rank first, second, third and fourth, respectively. The crisis management practices adopted by

the groundnut growers related to harvesting and storage are given in table no. 6 and results revealed that; farmers adopted practices for harvesting at proper time (87.50 per cent), following proper method of threshing, grading and transporting (78.31 per cent) and proper protection measures in storage (61.17 per cent) with rank first, second and third, respectively. Results are in line with Vinaya et al., (2017) and Gohil et al., (2016).

Table 6 : Distribution of respondents according to adoption of harvesting and storage related crisis management practices n=200

Sr. No.	Practices	Expert score	Adoption score	Per cent	Rank
1	To follow proper t protection measures in storage.	1.03	0.63	61.17	III
2	For timely harvesting	1.04	0.91	87.50	I
3	To follow proper method of threshing, grading and transporting.	0.83	0.65	78.31	II

It can be concluded groundnut growers adopted measures for timely harvesting, proper method of grading and storage.

CONCLUSION

The low level of awareness and adoption of important crisis management practices in groundnut can be resulted into low level of production. A high adoption was observed in case of seed selection, timely fertilizer application and timely harvesting and storage. But comparatively less adoption was observed with plant protection aspects it is therefore implied that line departments departments in co-ordination with SAU's should develop and disseminate effective plant protection technology that can be transferred to farmers through more number of demonstrations to raise the technical competency. Thus, the extension agency needs to put more efforts to transfer the available technical know-how of these practices to the farmers as speedily as possible.

REFERENCES

Amir, M. I. 1996. Development and application of a standardize knowledge test for summer groundnut production technology, M.Sc. (Agri.) Thesis (Unpublished) Gujarat Agricultural University, Sardarkrushinagar.

Anonymous, 2013. District wise area, production and yield per hectare of kharif groundnut crop in Gujarat state

for the years (2011 to 2013). SEA (Solvent Extractors' Association of India) groundnut crop survey

Gohil, G.R., Raviya, P.B. and Barad, V.G. (2016). Association Between the Adoption of Crisis Management Practices and Selected Profile Characteristics of Cotton Growers. *Guj. J. Ext. Edu.*, 27(1): 67-69

Hadiya, B. B. 2013. Knowledge and adoption of practices of groundnut recommended by JAU & GAU in South Saurashtra agro climatic zone of Gujarat state. M.Sc. (Agri.) Thesis (Unpublished). Junagadh Agricultural University, Junagadh

Kanani, P. R. 1998. Indigenous practices of groundnut cultivation followed by the farmers of South Saurashtra Zone in Gujarat State. Ph.D. Thesis (Unpublished), Gujarat Agricultural University, Sardarkrushinagar.

Vinaya Kumar, H. M., Shivamurthy, M., Govinda Gowda, V. and Biradar, G. S. (2017). Assessing decision-making and economic performance of farmers to manage climate-induced crisis in Coastal Karnataka (India). *Climatic Change*. Springer, May 2017, 142 (1):43–153. doi:10.1007/s10584-017-1928-x

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