Int.J.Curr.Microbiol.App.Sci (2017) *6*(9): 2207-2212

International Journal of Current Microbiology and Applied Sciences
ISSN: 2319-7706 **Volume 6 Number 9 (2017) pp. 2207-2212**
Journal homepage: http://www.ijcmas.com

Original Research Article https://doi.org/10.20546/ijcmas.2017.609.270

Opinion of Farmers toward Improved Ginger Production Technology in Udaipur District of Rajasthan, India

Vikas Kumar[1*], S.S. Sisodia[2] and Yogita Ranawat[2]

[1]Department of Extension Education, SKNAU, Jobner Rajasthan-303328, India
[2]Department of Extension Education, RCA (MPUA&T), Udaipur, Rajasthan-313001, India
**Corresponding author*

Keywords

Spice, Ginger, Opinion, Production and Technology.

Article Info

Accepted:
23 August 2017
Available Online:
10 September 2017

A B S T R A C T

Ginger is an important spice and medicinal crop. The present study was conducted in Udaipur district of Rajasthan. There are total eleven tehsils in Udaipur district, out of which two tehsils namely, Jhadol and Gogunda were selected on the basis of maximum area under ginger cultivation. Five villages from each identified tehsil were selected on the basis of maximum area under ginger cultivation. For selection of respondents, 100 ginger growers were randomly selected from identified villages (10 from each village) for data collection. The study reveals that, majority of respondents 65.00 per cent have favourable opinion whereas, 20.00 per cent ginger growers have least favourable and remaining 15.00 per cent respondents had more favourable opinion about improved ginger production technology. There was significant difference between the respondents of selected tehsils about opinion farmers toward improved ginger production technology.

Introduction

Ginger the underground stem, or rhizome, of the plant has been used as spice and medicine to help digestion and treat stomach upset, diarrhea, and nausea. Ginger has also been use to help treat arthritis, colic, and heart conditions. Ginger is an aromatic spicy-swollen rhizome often dried and grounded to a yellow powder and widely used as a flavor in biscuits, cake, cookies or preserved in syrups. Ginger is an underground stem called rhizome of the plant, it is rich in starch, volatile oil and protein. It contains 2-3% proteins, 0.9% fats, 2.4% fiber, 12.3% carbohydrates and is good source of vitamins, minerals and trace elements.

In Rajasthan, ginger crop is cultivated mainly in Udaipur, Dungarpur and Baran districts, producing total of 246 tons in 122 ha. The climatic conditions of the Udaipur district are most suitable for cultivation of ginger but the production of this crop is very less and production decreases year after year very rapidly.

Materials and Methods

The present investigation was conducted in Udaipur district of Rajasthan because of the selected district has the highest area and great potential of increasing production and

productivity under ginger crop. The selected district consists of eleven tehsils, out of which two tehsils, namely jhadol and gogunda with maximum area under ginger crop were selected for the study purpose. Five villages from each tehsil were identified on the basis of maximum area under ginger crop. Thus, in all ten villages were selected for the present investigation. A comprehensive list of ginger growers prepared with the help of village patwari and agriculture supervisor of respective village, out of list 10 farmers were selected from each village on the basis of random sampling technique. Thus, total 100 farmers were selected for present investigation. Data were collected by personnel interview technique through suitable structured schedule. Thereafter, data were tabulated, analysed and inferences were drawn in light of the objective.

In order to answer the research questions mentioned under hypothesis and to achieve the object of the study, investigator undertook appropriate and most pertinent statistical analysis. The following statistical methods were used in the present study:

Percentage and frequency

The percentage and frequency of each studied item was calculated and simple comparisons were made.

Mean per cent score (MPS)

It was calculated by multiplying total obtained score of the respondents by 100 and divided by the maximum obtainable score.

$$\text{Mean per cent score} = \frac{\text{Total score obtained}}{\text{Maximum obtainable score}} \times 100$$

Rank

Ranks were accorded in the descending order according to the mean % score obtained. This was used to find out the adoption in order of priority.

Standard Deviation

The standard deviation (S.D.) measures the absolute dispersion of variability of distribution. The standard deviation was used in categorization of respondents in different groups.

$$SD = \sqrt{\frac{\Sigma X_i^2}{n} - \left(\frac{\Sigma X}{n}\right)^2}$$

Where,

$\sum x_i^2$ = Sum of squares of the observation
$\sum x_i$ = Sum of values of the observation
n = Number of respondents

'Z' test (Standard Normal Deviate test)

This test was used to observe significance of difference between two sample mean for large sample (i.e. n>30). Formula for 'Z' test is as under

$$Z = \frac{|\bar{X}_1 - \bar{X}_2|}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}}$$

Where,

X_1 = Mean of first sample
X_2 = Mean of second sample
S_1 = Standard deviation of first sample
S_2 = Standard deviation of second sample
n_1 = Size of first sample
n_2 = Size of the second sample

Results and Discussion

Opinion of the respondents about cultivation of ginger was measured different aspects. In all 15 opinion statements were enlisted. The

response of respondents about opinion was recorded on three points continuum. Thereafter, data were analyzed and results were presented in following tables.

Distribution of respondents on the basis of their opinion

On the basis of obtained score of opinion of respondents about ginger cultivation, the respondents were categorized into three groups as presented in table 1.

Table 1 reveals that out of 100 respondents, majority of respondents 65.00 per cent have favourable opinion about ginger cultivation whereas, 20.00 per cent ginger growers have least favourable in cultivation of this crop and remaining 15.00 per cent respondents possessed more favourable opinion about improved ginger production technology.

Analysis of table further reveals that 12.00 and 28.00 per cent respondents have least favourable opinion in Jhadol and Gogunda tehsils respectively. While, 62.00 and 68.00 per cent respondents having favourable opinion of Jhadol and Gogunda tehsils. Whereas, 26.00 and 4.00 per cent respondents had more favourable opinion level group in Jhadol and Gogunda tehsils respectively.

Aspect-wise opinion of respondents regarding improved ginger production technology

To get a clear picture of opinion of ginger growers, aspect-wise opinion of ginger growers was works out. For this mean per cent scores for each aspect was calculated and ranked accordingly. The results of the same have been presented in table 2.

Data presented in table reveal that most of the ginger growers were strongly agreed with fact that ginger is a valuable spice and medicine plant with MPS 83.00 and ranked first by the respondents. This was followed by the statement natural calamities are not the important barriers for cultivation of ginger crop, the scope in future is great because it possesses the medicinal value and all categories of farmers may cultivate the ginger crop with MPS 72.00, 67.50 and 64.50 assigned rank second, third and fourth respectively.

Fig.1 Opinion toward improved ginger production technology

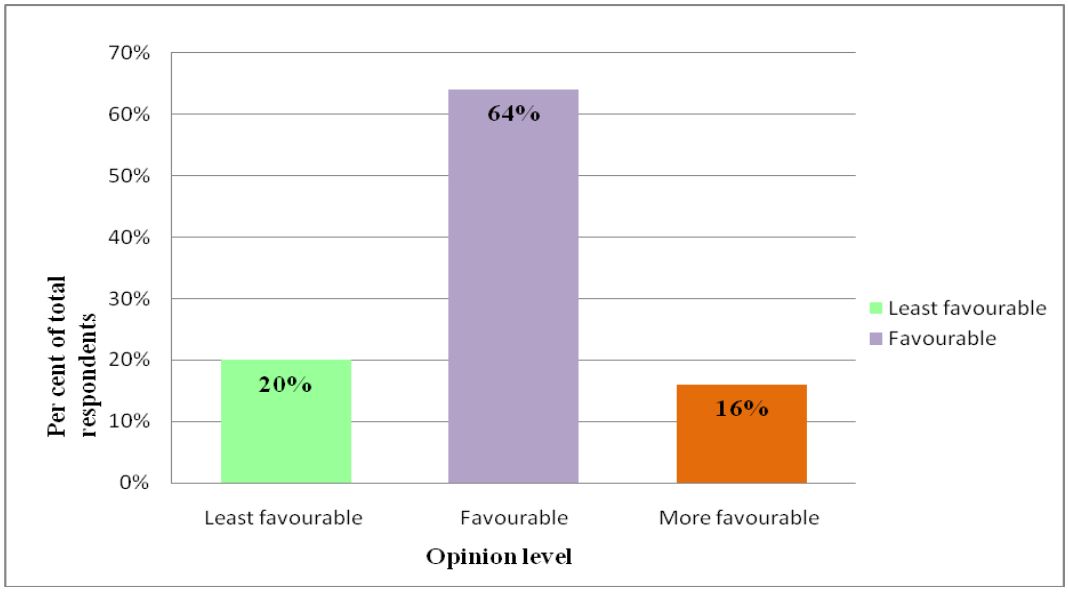

Table.1 Distribution of respondents according to their opinion toward improved ginger production technology

n=100

S. No.	Opinion	Jhadol tehsil		Gogunda tehsil		Total	
		F	%	f	%	f	%
1.	Least favourable (<12.25)	6	12.00	14	28.00	20	20.00
2.	Favourable (12.25 to 18.00)	31	62.00	34	68.00	65	5.00
3.	More favourable (>18.00)	13	26.00	2	4.00	15	15.00
	Total	50	100	50	100	100	100

f = frequency, % = per cent

Table.2 Aspect-wise opinion of respondents regarding improved ginger production technology

n = 100

S. No.	Aspect	MPS	Rank
1	Ginger is a valuable spice and medicine plant	83.00	I
2	The cultivation of ginger is less profitable than other cereal and cash crops	28.00	XIV
3	Ginger is less input intensive crop	36.50	XII
4	This crop is needs less technical skill	31.50	XIII
5	In ginger crop disease & insect-pest infestation is very less	9.50	XV
6.	The soil in our area is suitable for its cultivation	53.50	VIII
7.	All categories of farmers may cultivate the ginger crop	64.50	IV
8.	The extension agents working in our area is competent enough to educate about its scientific cultivation	48.50	X
9.	There is always problem of easy marketing	61.00	V
10	It is possible for me to go for commercial cultivation of this crop because I am aware about its marketing	57.50	VI
11	Non-availability of timely credit facilities repel us from the cultivation of this crop	51.50	IX
12	The scope in future is great because it possesses the medicinal value	67.50	III
13	Water requirement is more for its cultivation than other crops	54.50	VII
14	Lack of proper training is barrier in its cultivation	47.50	XI
15	Natural calamities are not the important barriers for cultivation of ginger crop	72.00	II

MPS = Mean per cent score, n = Sample size

Table.3 Comparison of opinion between ginger growers of selected tehsils

S.No	Category of sample	Mean	S.D.	'Z' value
1.	Respondents of Jhadol Tehsil	16.42	2.94	4.03**
2.	Respondents of Gogunda tehsil	14.24	2.56	

** Significant at 1 per cent level of significance

Table 2 further reveals that ginger growers were also agree with the statements namely there is always problem of easy marketing, it is possible for me to go for commercial cultivation of this crop because I am aware about its marketing, water requirement is more for its cultivation than other crops and the soil in our area is suitable for its cultivation with MPS 61.00, 57.50, 54.50 and 53.50 have rank fifth, sixth, seventh and eighth respectively.

The data of this table also indicates that non-availability of timely credit facilities repel us from the cultivation of this crop, the extension agents working in our area is not competent to educate about its scientific cultivation, lack of proper training is barrier in its cultivation, ginger is less input intensive crop, this crop is needs less technical skill, the cultivation of ginger is less profitable than other cereal and cash crops and in ginger crop disease & insect-pest infestation is very less were ranked ninth, tenth, eleventh, twelfth, thirteen, fourteen and fifteen respectively.

Comparison of opinion of farmers about improved ginger production technology

In order to find out the significance of difference between the farmers of selected tehsils with respect to the opinion by them, 'Z' test was applied. For this purpose, the following null hypotheses were tested and results of which are presented in table 3.

NH_{01}: There is no significant difference between the ginger growers of two selected tehsils with respect to opinion about improved ginger production technology.

RH_{01}: There is significant difference between the ginger growers of two selected tehsils with respect to opinion about improved ginger production technology.

Table 3 shows that the calculated value of 'Z' (4.03) is greater than its tabulated value at 1 per cent level of significance. Thus, null hypothesis (NH_{03}) is rejected and research hypothesis entitled "There is significant difference between the ginger growers of two selected tehsils with respect to opinion about improved ginger production technology." was accepted (Fig. 1).

It infers that there was significant difference among the farmers of selected tehsil with respect to opinion about improved ginger production technology. Further analysis of table shows that opinion of respondents of Jhadol tehsil possessed more than the respondents of Gogunda tehsil.

The study reveals that, majority of respondents 65.00 per cent have favourable opinion whereas, 20.00 per cent ginger growers have least favourable and remaining 15.00 per cent respondents had more favourable opinion about improved ginger production technology. The findings of the study indicated that farmers had more favourable opinion because ginger is valuable spice and medicine plant, natural calamities are not the important barriers for cultivation of ginger crop and the scope in future is great because it possesses the medicinal value whereas, least favourable opinion because in ginger crop disease & insect-pest infestation is very less, the cultivation of ginger is less profitable than other cereal and cash crops and this crop is needs less technical skill. Findings indicated that there was significant difference between the respondents of selected tehsils about opinion farmers toward improved ginger production technology.

Acknowledgements

The authors are heartily thankful to Department of Extension Education, Rajasthan College of Agriculture, MPUA&T

(Udaipur) for providing data collection facilities for the investigation.

References

Assis, K., and Mohd Ismail, H.A. 2011. Knowledge, Attitude and Practices of Farmers towards Organic Farming. International Journal *of Economics Research* 2011 2(3):1-6.

Dakhore, K.M., Deshmukh, K.A. and Age, P.C. 2003. Assessment of knowledge and attitude of beneficiaries towards Horticulture Development Programme. *Maharashtra Journal of Extension Education* 22:129-130.

Kumar, V., Sisodia S.S. 2016. Knowledge of Farmers about Improved Ginger (*Zingiber Officinale L.)* Production Technology in Udaipur District of Rajasthan. *Journal of Progressive Agriculture*, 7 (2), 98-100.

Kumar, V., Sisodia S.S., Choudhary K. C., and Tiwari B. 2016. Constraints Perceived by the Farmers in Adoption of Improved Ginger Production Technology in Udaipur District of Rajasthan. *International Journal of Agriculture Sciences*, 8(57), 3154-3157.

How to cite this article:

Vikas Kumar, S.S. Sisodia and Yogita Ranawat. 2017. Opinion of Farmers toward Improved Ginger Production Technology in Udaipur District of Rajasthan. *Int.J.Curr.Microbiol.App.Sci.* 6(9): 2207-2212. doi: https://doi.org/10.20546/ijcmas.2017.609.270