

# KNOWLEDGE EXTENT OF FARMERS REGARDING IMPROVED RADISH PRODUCTION TECHNOLOGY IN EASTERN UTTAR PRADESH

## ABSTRACT

Radish is an important source of nutrition in our diet. Although farmers in eastern uttar pradesh are growing radish for a long time many farmers are lacking good knowledge of radish and its new varieties production practices. The study was conducted to know the level of knowledge of production practices among radish cultivating farmers of the eastern uttar pradesh region. Highest knowledge level was observed in sowing time and irrigation management (100 per cent) followed by, field preparation (82.67 per cent), harvesting (80.66 per cent), weed management (74.00 per cent), high yielding varieties (72.00 per cent), plant protection measure (70.00 per cent), fertilizer application (68.67 per cent), spacing (68.00 per cent), inter cropping (61.33 per cent), plant growth regulator (50.67 per cent), respectively. Total knowledge index was calculated to be 74.67 per cent. Out of sixteen variables i.e., caste, education, material possession, risk orientation, scientific motivation, extension contact, awareness and adoption were found highly significant and positively correlated with knowledge level. The variables age is also highly significant but negatively correlated with knowledge level. Variables like annual income, marital status, land holding, type of family, size of family and social participation were found not significant but positively correlated with knowledge level. Only one variable economic motivation was found not significant and negatively correlated with knowledge level.

**Keywords-** knowledge level, radish growers, eastern uttar pradesh

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## INTRODUCTION

Radish (*Raphanus sativus* L.) is a root vegetable crop that belongs to *Brassicaceae* family. Fortified merchandise has been prefabricated from dehydrated radish and its leaves powder viz., Chilly biscuits and soup mix. Radish is grown for its young gentle tuberous roots which are eaten raw as salad or cooked as a vegetable. It is enjoyable for its pungent flavor and considered as an appetizer. The juvenile leaves are also cooked as vegetable and eaten. Radish has revitalizing and purifying properties. Radish is useful in liver and gall bladder

inconvenience. The composition of fresh Radish root is as Moisture (94.4 g), Protein (0.7 g), Fat (0.1 g), Fiber (0.8 g), Carbohydrates (3.4 g), Minerals (0.6 g), Phosphorus (22 mg), Iron (0.06 mg), Vitamin A (5 I.U.), Riboflavin (0.02 mg), Thiamine (0.06 mg), Calcium (50 mg) and Vitamin C (15 mg). In India, radish is grown over an area 202 million hectare in 2018-19 with an annual production of 3145 metric ton (nhb.gov.in). It is mainly grown in West Bengal, Bihar, Uttar Pradesh, Karnataka, Punjab, Maharashtra and Assam. In Uttar Pradesh it is grown on large scale throughout the year in areas around the big cities. In Uttar Pradesh radish accounts for 5.84-million-hectare area with a production of 150.27 metric ton. The average productivity of radish is 12.77 t/ha. Considering the importance of the radish crop it is imperative to study it from different viewpoints so that we can get more and more knowledge about it, which can help our research system to improve the productivity and efficiency of agricultural sector. In our country, the set-up of our agricultural system is mainly divided in three components i.e., research, education and extension (ICAR Handbook of Agriculture). Extension plays a large role in bridging the gap between farmers and research which can be validated with the success of green revolution programmes of the late 1960s. The extension service in the country has a huge network of professional extension workers at the national, state district, sub-division, and block and village level. Several programmes are running for increasing knowledge level of farmers throughout the country. But still, there is a wide gap between the technology available with the researchers in research institutes and its knowledge in farmer's fields particular in radish. The knowledge level of improved technology of radish crop by the farmers is not uniform due to several reasons i.e., lack of mechanization, non-availability of quality seeds, lack of irrigation facilities, lack of market facilities (Kumar, 2021; Shitu *et al.*, 2018). So, this study was designed to carried out the knowledge level of farmers regarding improved radish production technology in eastern uttar pradesh.

## **METHODOLOGY**

The region of Eastern Uttar Pradesh comprises with eighteen districts out of that Jaunpur district were selected purposely for the study during 2020-2021 to know the knowledge level of farmers. The study was carried out in Kerakat and Dobhi block of Jaunpur district. A total of ten villages (five villages from each block) were selected with the help of a stratified random sampling method from two blocks. A total of one hundred and fifty radish growers (fifteen from each village) were selected with simple random sampling for the study. The primary data were collected personally through group discussion and a pre-tested interview schedule which was prepared on the basis of objectives of the study. For

determining knowledge level, a questionnaire was prepared as per recommended package of practices of radish crop. The responses were recorded on a two-point continuum as complete and no knowledge and were given 1 and 0 score, respectively. The knowledge level possessed by individual respondents was measured by computing knowledge index. On the basis of scores gained by each respondent the respondents were categorised into low (up to 08), medium (09 to 18) and high (above 19).

## RESULTS AND DISCUSSION

Knowledge plays an important role in decision making process at the individual level. Ascertaining the level of knowledge among farmers was done to know their perception about the sustainability of radish crop. Knowledge was perceived as the level up to which different practices were known by the sampled farmers. Further, practice-wise knowledge was calculated to see the level of knowledge. table 1 shows that among all eleven agricultural practices of crop production, cent per cent knowledge level was observed in sowing time and irrigation management followed by, harvesting (80.66 per cent), field preparation (76.00 per cent), weed management (74.00 per cent), high yielding varieties (72.00 per cent), plant protection measure (70.00 per cent), fertilizer application (68.67 per cent), spacing (68.00 per cent), inter cropping (61.33 per cent), plant growth regulator (50.67 per cent), respectively. Total knowledge index was calculated to be 74.67 per cent. By assessed of table 1 it can be said that the knowledge level of farmers about radish production technology seems to be satisfactory.

**Table 1. Practice wise knowledge level of farmers**

S. No.	Practices	%	Rank
1.	Field preparation	76.00	IV
2.	High yielding varieties	72.00	VI
3.	Sowing time	100.00	I
4.	Spacing	68.00	IX
5.	Fertilizer Application	68.67	VIII
6.	Irrigation Management	100.00	II
7.	Plant Growth Regulator	50.67	XI
8.	Inter Cropping	61.33	X

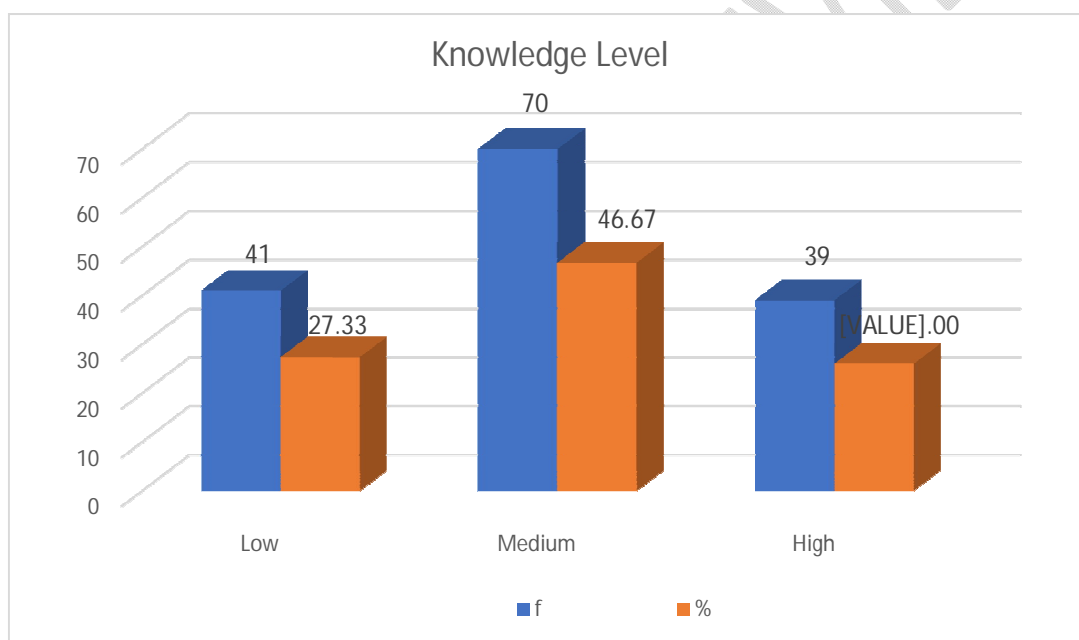
9.	Weed Management	74.00	V
10.	Plant Protection Measure	70.00	VII
11.	Harvesting	80.66	III

%= Per cent

**Table 2. Overall knowledge level of farmers**

S. No.	Knowledge Level	f	%
1	Low (up to 08)	41	27.33
2	Medium (09 -18)	70	46.67
3	High (above 19)	39	26.00

f= frequency, %= Per cent



**Fig. 1 Knowledge level wise distribution of farmers**

Results from table 2 revealed that 46.67 per cent farmers had medium level of knowledge regarding radish production technology followed by, low (27.33%) and high (26.00%) respectively.

**Table 3. Correlation coefficient between different variables and knowledge level of farmers regarding improved radish production technology**

S. No.	Variables	Correlation coefficient
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1.	Age	-0.732851216**
2.	Caste	0.255540265**
3.	Education	0.966253227**
4.	Annual Income	0.14701906 <sup>NS</sup>
5.	Marital Status	0.148187521 <sup>NS</sup>
6.	Land Holding	0.115165393 <sup>NS</sup>
7.	Size of Family	0.106518594 <sup>NS</sup>
8.	Type of Family	0.156774219 <sup>NS</sup>
9.	Material Possession	0.325971429**
10.	Social Participation	0.099757079 <sup>NS</sup>
11.	Risk Orientation	0.869029974**
12.	Economic Motivation	-0.020541457 <sup>NS</sup>
13.	Scientific Orientation	0.331621206**
14.	Extension Contact	0.86118537**
15.	Adoption	0.977489366**

\*Significant at 0.05 per cent probability level 0.176

\*\* Significant at 0.01 per cent probability level 0.230

Table 3. shows that out of sixteen variables i.e., caste, education, material possession, risk orientation, scientific motivation, extension contact, and adoption was found highly significant and positively correlated with knowledge level. The variables age is also highly significant but negatively correlated with knowledge level. Variables like annual income, marital status, land holding, type of family, size of family and social participation were found not significant but positively correlated with knowledge level. Only one variable economic motivation was found not significant and negatively correlated with knowledge level. It means that if the value of these variable increases, the knowledge level of cultivation practices was also increases.

## CONCLUSION

It is concluded from the study that the majority of the radish grower had a medium level of knowledge regarding technological practices of radish crop cultivation. It becomes very important for extension agencies to play a role to create awareness among farmers about the recommended practices of radish cultivation through training and group discussion as well as field trips. As radish crop has much importance to us, so there is a need to create a

viable and sustainable agricultural system with the judicious use of resources so that our upcoming generations do not feel deprived of their sustenance need i.e., food.

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