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# Knowledge Status of respondents about redgram cultivation practices under DDP watershed area in NEK region

Agricultural Science

**KEYWORDS:** Knowledge Status, Redgram technologies, Watershed & Relationship with SES

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## ABSTRACT

*The present study was conducted in Lingasugur and Raichur taluks of Raichur district of Karnataka state during 2012-13. From each taluka, two watershed villages were selected based on highest number of beneficiaries under watershed and from each 15 watershed farmers and non-watershed farmers were selected based on random sampling method. Thus the total sample size constitute for the study was 120 respondents which constitute of 60 watershed farmers and 60 non-watershed farmers. The data was collected from the respondents using pretested structured interview schedule personally. The collected information was analyzed using appropriate statistical tools. The results of the study revealed that, around 70 per cent of watershed farmers belonged in medium to higher knowledge category and 63.33 per cent of non-watershed farmers identified in range from medium to high knowledge category. more than 50 per cent of watershed farmers had full knowledge towards sowing time, recommended yield, FYM application, seed treatment, summer ploughing and pest management and in case of non-watershed farmers around 30 per cent had full knowledge with regards to summer ploughing, FYM application, spacing and seed rate. Variables namely landholding, income significant at 0.01 level, scientific orientation, risk orientation, management orientation significant at 0.05 level of watershed framers had a positives and significant relationship with their knowledge level of redgram cultivation*

**Introduction**

Pigeonpea (Cajanus cajan L. Millsp.) commonly known as redgram, tur or arhar is a very old crop of this country. It is considered to be origin of peninsular India. Pigeon pea is the second most important pulse crop in the country after chickpea. It accounts for 20 per cent of the total output of all the pulses. Among the major countries growing pigeon-pea, India ranks first accounting for 90 per cent of world output with an area of 3.58 million hectares and production of 2.37 million tons. The major pigeon-pea producing states are Maharashtra, Uttar Pradesh, Karnataka, Gujarat and Andhra Pradesh. In Karnataka it is grown in an area of 5.95 lakh hectares with the production of 2.57 lakh tons. It is largely grown in northern parts of the state. Important pigeon pea growing districts of the state are Gulbarga, Bijapur, Bidar and Raichur. Even though it is grown in larger area, the productivity is very low as compared to average productivity.

The knowledge and adoption of improved cultivation practices plays an important role in improving the production and productivity of any crop. The productivity can be increased with increase in knowledge and adoption of recommended cultivation practices of pigeonpea. There is need to create awareness among the farming community about recommended cultivation practices of pigeonpea. Keeping this as a background the present study was undertaken with an objective to ascertain the knowledge and adoption level of recommended cultivation practices of pigeonpea by farmers.

**Methodology**

The present study was conducted in Raichur district of Karnataka state during 2012-13. In this district DDP XII watershed programmes were started during the year 2006-07 in a phased manner. Out of five taluks, two taluks *viz.,* Lingasugur and Raichur were purposively selected, because these taluks stood first and second in implementation of watershed programmes in the district. From each taluka, two watershed villages were selected based on highest number of beneficiaries under watershed. The selected watershed villages were Kadlur & Matamari from Raichur taluk and Naglapur & Huppernandhihal from Lingasugur taluka for the study. Each of 15 watershed farmers and non-watershed farmers were selected based on random sampling method. Particularly non-watershed farmers were drawn from the place which is distance of 5 km radius of watershed catchment area. Thus the total sample size constitute for the study was 120 respondents which constitute of 60 watershed farmers and 60 non-watershed farmers. The data was collected from the respondents using pretested structured interview schedule personally. The collected information was analyzed using appropriate statistical tools.

**Results and discussion**

**Overall knowledge status of farmers with respect to redgram cultivation practices**

With respect to over all knowledge of improved redgram cultivation practices, it is revealed from Table 1 that, around 70 per cent of watershed farmers belonged in medium to higher knowledge category, followed by, 63.33 per cent of non-watershed farmers identified in range from medium to high knowledge category. Whereas, similar (30.00% & 36.67%) percentage of both watershed farmers and non-watershed farmers fall under low knowledge categories.The possible reason might be higher exposure to redgram improved technology due to higher social participation, extension contact and risk orientation watershed farmers higher knowledge compared to non-watershed farmers.

**Knowledge status of the farmers about individual recommended cultivation practices of redgram**

With respect to redgram cultivation practices, more than 50 per cent of watershed farmers had full knowledge towards sowing time, recommended yield, FYM application, seed treatment, summer ploughing and pest management. Whereas around 40 per cent had partial knowledge regarding disease management, seed rate, spacing and improved varieties. Meager percentage had no knowledge category. In case of non-watershed farmers around 30 per cent had full knowledge with regards to summer ploughing, FYM application, spacing and seed rate. The range of 30.00 to 60.00 percentages of non-watershed farmers had partial knowledge with respect to improved practices. In case of no knowledge category 70 per cent of non-watershed farmers had noticed no knowledge about seed treatment, disease management, pest management and improved variety. The possible reason for more percentage of watershed farmers falling in full knowledge category as compared to non-watershed farmers was

due to more exposure to various training programmes, awareness programmes coupled with high socio-economic status.

**Zero order correlation between knowledge status of red gram farmers with their independent variables**

The correlation co-efficient presented in the Table 5 showed variables namely landholding, income significant at 0.01 level, scientific orientation, risk orientation, management orientation significant at 0.05 level of watershed framers had a positives and significant relationship with their knowledge level of redgram cultivation. This inferred that, farmers with different land holding and high income had different knowledge level regarding new improved technologies of redgram cultivation practices. The more landholding farmers showing an interest towards these new technologies if the cost is more also as compare to small landholding farmers and also in case of scientific, risk and management orientation with more scientific outlook would be more willing to know latest technologies, they are ready to take risk about those technologies and managing capacity also more. Hence, their knowledge levels also more in case of watershed farmers. The possible reason for non-significant relationship may be due to the fact that non-watershed farmers who are traditional and with less scientific outlook, they will never try the latest technologies.

**Conclusion**

It can be concluded from the results of the study that majority of the majority of the watershed farmers belonged to medium to high category of knowledge and adoption of redgram cultivation practices and majority of them were having full knowledge regarding individual redgram cultivation practices and majority of them full adopted some of the redgram cultivation practices. Variables like landholding, income, scientific orientation, risk orientation, management orientation were positively and significantly related with the knowledge and adoption of redgram cultivation practices. Therefore the policy makers, administrators and others involved in agricultural extension should concentrate on the variables that are significantly related with the knowledge and adoption. Suitable extension education strategies should be formulated to improve the knowledge and adoption of redgram cultivation practices.

**Table 1: Overall knowledge status of farmers about Redgram cultivation practices**

| Sl. No | Category | Watershed farmers (n1=60) | | Non-Watershed farmers (n2=60) | |
|---|---|---|---|---|---|
| | | Frequency | Per cent | Frequency | Per cent |
| 1. | Low (Mean – 0.425 SD) | 18 | 30.00 | 22 | 36.67 |
| 2. | Medium (Mean ± 0.425 SD) | 19 | 31.67 | 24 | 40.00 |
| 3. | High (Mean + 0.425 SD) | 23 | 38.33 | 14 | 23.33 |
| | | Mean = 19.06 SD = 2.83 | | Mean = 14.41 SD = 2.34 | |

**Table 2: Knowledge status of the farmers about individual recommended cultivation practices of Redgram**

| Sl. No. | Practices | Watershed farmers (n1=60) | | | | | | Non-Watershed farmers (n2=60) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Full Knowledge | | Partial Knowledge | | No Knowledge | | Full Knowledge | | Partial knowledge | | No Knowledge | |
| | | Freq. | % | Freq. | % | Freq. | % | Freq. | % | Freq. | % | Freq. | % |
| 1 | Summer ploughing | 36 | 60.00 | 24 | 40.00 | 0 | 0.00 | 28 | 46.67 | 31 | 51.67 | 1 | 1.67 |
| 2 | Improved variety | 25 | 41.67 | 13 | 21.67 | 12 | 20.00 | 17 | 28.33 | 23 | 38.33 | 20 | 33.33 |
| 3 | Sowing time | 47 | 78.33 | 9 | 15.00 | 4 | 6.67 | 20 | 33.33 | 20 | 33.33 | 20 | 33.33 |
| 4 | Seed rate | 29 | 48.33 | 28 | 46.67 | 3 | 5.00 | 16 | 26.67 | 39 | 65.00 | 4 | 6.67 |
| 5 | Spacing | 29 | 48.33 | 27 | 45.00 | 4 | 6.67 | 21 | 35.00 | 33 | 55.00 | 6 | 10.00 |
| 6 | Seed treatment | 31 | 51.67 | 12 | 20.00 | 17 | 28.33 | 7 | 11.67 | 11 | 18.33 | 42 | 70.00 |
| 7 | FYM | 37 | 61.67 | 19 | 31.67 | 4 | 6.67 | 23 | 38.33 | 21 | 35.00 | 16 | 26.67 |
| 8 | NPK fertilizer | 22 | 36.67 | 31 | 51.67 | 7 | 11.67 | 16 | 26.67 | 27 | 45.00 | 17 | 28.33 |
| 9 | Pest management | 35 | 58.33 | 15 | 25.00 | 10 | 16.67 | 13 | 21.67 | 20 | 33.33 | 27 | 45.00 |
| 10 | Disease management | 29 | 48.33 | 14 | 23.33 | 17 | 28.33 | 5 | 8.33 | 23 | 38.33 | 32 | 53.33 |
| 11 | Yield | 41 | 68.33 | 16 | 26.67 | 3 | 5.00 | 13 | 21.67 | 25 | 41.67 | 20 | 33.33 |

**Table 3: Zero order correlation between knowledge status of redgram farmers with their independent variables**

**(n=60)**

| Sl. No. | Variables | Knowledge level of red gram crop | |
|---|---|---|---|
| | | Watershed farmers (n1=60) | Non-Watershed farmers (n2=60) |
| 1. | Age | -0.048 $^{NS}$ | -0.080 $^{NS}$ |
| 2. | Education | 0.127 $^{NS}$ | 0.004 $^{NS}$ |
| 3. | Landholding | 0.313** | 0.090 $^{NS}$ |
| 4. | Income | 0.457** | 0.067 NS |
| 5. | Extension contact | 0.031 $^{NS}$ | 0.120 $^{NS}$ |
| 6. | Social participation | 0.125 $^{NS}$ | 0.027 $^{NS}$ |
| 7. | Mass media utilization | 0.035 $^{NS}$ | 0.047 $^{NS}$ |
| 8. | Risk orientation | 0.276* | 0.238 $^{NS}$ |
| 9. | Scientific orientation | 0.363* | 0.216 $^{NS}$ |
| 10. | Management orientation | 0.405* | 0.290* |

* - Significance at 5% level of probability

** - Significance at 1% level of probability

NS – Non-significant

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