

Farmers Acquaintance About Improved Package of Practices of Black Gram in Tribal Zone of Rajasthan

L.S. Bareth¹ and S.L. Intodia²

INTRODUCTION

Per capita net availability of pulses came down to 39.7 gms/day in 1991 as against 60.7 gms/day in 1950 and 74.9 gms/day in 1959. Black gram is the fourth important pulses crop covering an area of 3.0 million hectares and the highest production so far of 1.7 million tonnes recorded in 1985-86. In Rajasthan, urd is grown on an area 141 thousand hectares with a yield of 51.35 thousand tonnes average productivity of 364 kg/ha.

The main reason for the decline in per capita availability of attributed to the sluggishness in the growth of area, production and yield of these crops. As a result of excess demand over supply the prices of pulses are rising rapidly and deficiency in the intake of protein, particularly in case of poor and low income people, is becoming a cause of great concern. Though several factors and conditions are responsible for such a low yield but the nature and extent of knowledge of improved technology is primarily concerned with low productivity and had direct bearing on the production output. In view this, a study was

conducted in IV Agro-climatic zone of Rajasthan to know that how far urd production technology has been accessible to the farmers. With this point in mind the following objective of the study has been developed "To find out the extent of knowledge of small and marginal farmers about improved package of practices of urd cultivation".

METHODOLOGY

The state of Rajasthan is divided into nine agro climatic zones. Of these two zones namely Sub-humid southern plains and Aravali hills (IV-A) & Humid Southern plains (IV-B) were drawn on the basis of highest percentage of tribal population in the state and most of the urd is sown under rainfed condition. From each zone, three tehsils with maximum area from each of the three categories viz. high, medium and low urd producing area were drawn. At the next stage of sampling two VEW circles from each tehsils on the basis of highest urd area were taken up. Thus, 12 villages were sought from which 192 urd growers (50% small & 50% marginal) were drawn by systematic random sampling technique.

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1. Assitt Professor, Directorate of Extension Education, Rajasthan Agricultural University, Bikaner Campus, UDAIPUR - 313 001 (RAJASTHAN)
 2. Director, Extension Education, Rajasthan Agricultural University, Bikaner : UDAIPUR - 313 001 (RAJASTHAN)

RESULT AND DISCUSSION

Knowledge has been considered by every author as a pre-requisite for the adoption. In order to increase the level of adoption, farmers must be made aware of

more number of farmers in zone IV-B (24) were in higher knowledge group.

Individual practicewise knowledge of farmers of both the zones was worked out to get clear idea about extent of knowledge and to see practice wise

Table 1 : Distribution of farmers on the basis of extent of knowledge towards urd cultivation :

| Extent of knowledge | Zone IV-A | | | | | | Zone IV-B | | | | | | Over All | | | | | |
|---------------------|-----------|-------|----------|-------|-------|-------|-----------|-------|----------|-------|-------|-------|----------|-------|----------|-------|-------|-------|
| | Small | | Marginal | | Total | | Small | | Marginal | | Total | | Small | | Marginal | | Total | |
| | F | % | F | % | F | % | F | % | F | % | F | % | F | % | F | % | F | % |
| Low | 2 | 1.04 | 10 | 5.21 | 12 | 6.25 | 6 | 3.12 | 2 | 1.04 | 8 | 4.16 | 8 | 4.17 | 12 | 6.25 | 20 | 10.42 |
| Medium | 38 | 19.79 | 30 | 15.62 | 68 | 35.42 | 27 | 14.06 | 37 | 19.27 | 64 | 33.33 | 65 | 33.85 | 67 | 34.90 | 132 | 68.75 |
| High | 8 | 4.17 | 8 | 4.17 | 16 | 8.34 | 15 | 7.81 | 9 | 4.69 | 24 | 12.50 | 23 | 11.98 | 17 | 8.85 | 40 | 20.83 |

latest knowledge about the technologies. The results of extent of knowledge of urd growers are presented in this part.

The data reveal that 35.42 percent urd growers of zone IV-A had average knowledge of improved package of practices of urd cultivation followed by high (8.34%) and Low (6.25%). The number of small farmers fell in low, medium and high category were 2, 38 and 8 respectively. In case of marginal farmers these were 10, 30 and 8 respectively. The table also shows that majority of urd growers of zone IV-B had medium knowledge. Next to it were in high knowledge group (12.50%).

Study of table-1 reveals that in general 68.75, 20.83 and 10.42 per cent respondents were in the categories of medium, higher and lower knowledge group respectively. The data further depict that in comparison to zonal IV-A (16) relatively

difference. The results of these are presented in Table-2.

Examination of table-2 shows that the small farmers of zone IV-A had maximum knowledge regarding 'spacing' (77.08 mps), 'inter cropping' (65.97)mps) 'irrigation management' (61.81 mps). The marginal farmers of this zone had also higher knowledge in these practices with 80.21, 62.15 and 58.33 mps respectively. It is also evident from the table both small and marginal urd growers of this zone had knowledge towards 'seed treatment' (12.92 & 15.42 mps), 'use of rhizobium culture' (21.09 & 25.00 mps) and 'plant protection measures' (23.21 & 28.57 mps) respectively.

Further, it was observed that small and marginal farmers of the zone IV-B had relatively high knowledge in practice viz; fertilizer application 'spacing' and cropping'. Data also indicate

Table 2 : Extent of knowledge of urd growers improved practices of urd.

| Sr. Improved Practices. No. | Zone Iv A | | Zone Iv B | | 'F' Ratio | |
|--|----------------|-------------------|----------------|-------------------|--------------|----|
| | Small (MPS) | Marginal (MPS) | Small (MPS) | Marginal (MPS) | | |
| 1. High Yielding Variety. | 29.81 | 24.36 | 27.54 | 22.43 | 2.02 | Ns |
| 2. Inter cropping | 65.97 | 62.15 | 57.64 | 60.07 | 2.65 | Ns |
| 3. Inoculation of seed with Rhizobium culture | 21.09 | 25.00 | 33.59 | 24.74 | 1.14 | Ns |
| 4. Soil treatment | 40.97 | 42.36 | 47.91 | 44.41 | 0.80 | Ns |
| 5. Seed treatment | 12.92 | 15.42 | 20.83 | 15.00 | 1.15 | Ns |
| 6. Time of sowing | 40.00 | 34.58 | 45.00 | 43.75 | 6.19 | * |
| 7. Seed rate | 56.94 | 52.08 | 43.75 | 43.06 | 2.21 | Ns |
| 8. Recommended spacing | 77.08 | 80.21 | 60.62 | 56.25 | 45.79 | ** |
| 9. Fertilizer application | 56.34 | 61.34 | 65.63 | 63.56 | 2.87 | Ns |
| 10. Weed Management | 44.01 | 46.07 | 40.89 | 38.54 | 3.09 | * |
| 11. Irrigation Management | 61.81 | 58.83 | 56.25 | 54.86 | 3.46 | * |
| 12. Plant Protection Measures | 23.21 | 28.57 | 27.35 | 26.49 | 0.82 | Ns |
| 13. Harvsting & storage | 45.13 | 44.45 | 44.79 | 39.59 | 0.54 | Ns |

Ns = Non Significant

* = Significant

** = Highly Significant

Table 3 : Mean percent scores of knowledge of the urd growers about improved practices (MPS)

| Sr. Recommended Practices No. | ZoneIVA | | Zone IVB | | Pooled | | |
|---|---------|------|----------|------|--------|--------|----|
| | (MPS) | Rank | (MPS) | Rank | (MPS) | Rank | |
| 1. High Yielding Variety | 27.08 | 10 | 24.99 | 12 | 26.03 | 12 | |
| 2. Intercropping | 64.06 | 2 | 48.44 | 4 | 56.25 | 4 | |
| 3. Seed Inoculation with Rhizobium culture | 23.05 | 12 | 29.17 | 10 | 26.11 | 11 | |
| 4. Soil treatment | 41.67 | 8 | 46.18 | 5 | 43.91 | 6 | |
| 5. Seed treatment | 14.17 | 13 | 8.54 | 13 | 16.04 | 13 | |
| 6. Time of sowing | 37.29 | 9 | 44.38 | 6 | 40.83 | 9 | |
| 7. Seed rate | 54.51 | 5 | 43.40 | 7 | 48.96 | 5 | |
| 8. Recommended spacing | 78.65 | 1 | 58.33 | 2 | 68.49 | 1 | |
| 9. Fertilizer application | 58.84 | 4 | 64.59 | 1 | 61.71 | 2 | |
| 10. Weed Management | 45.04 | 6 | 39.71 | 9 | 42.38 | 8 | |
| 11. Irrigation Management | 60.07 | 3 | 55.55 | 3 | 57.81 | 3 | |
| 12. Plant Protection Measures | 25.89 | 11 | 26.62 | 11 | 26.41 | 10 | |
| 13. Harvesting & Storage | 44.79 | 7 | 42.19 | 8 | 43.49 | 7 | |
| "F" Value | | | | | | 218.10 | ** |

rs = 0.85 t = 5.35 **

rs = rank correlation

** = significant at 1 percent

that marginal farmers had poor knowledge in 'seed treatment' (15 mps), next to it was in 'high yielding varieties' (22.43 mps) and 'inoculation of seed with rhizobium' culture' (24.74 mps). In contrast to this, small farmers had relatively poor knowledge in seed treatment followed by plant protection measures and 'high yielding varieties'.

To see the statistical significance of the difference towards each of the practices, test of analysis of variance ('F') was applied expect few practices 'F' value calculated was non-significant between small and marginal farmers of urd growing in zone IV-A and zone IV-B in 'time of sowing', 'spacing', 'weed' and irrigation management this difference in knowledge of various group was significant, In other words, there is difference in knowledge among different categories of farmers of both the zones in these practices.

Study of table-3 depicts that value of rank order correlation (r_s) 0.85, indicates high correlation between the ranks assigned by the urd growers of both the zones. From the above findings it could be concluded that though there is difference in magnitude of different practices of urd cultivation yet there exists relation in ranking knowledge possessed by urd growers of zone IV-A IV-B.

Table-3 also shows that in general, urd growers possessed more knowledge about spacing. This was followed by fertilizer application where 61.71 mps of

knowledge was recorded, "F value presented in Table-3 was highly significant. This reveals variation in knowledge of respondents towards different practices of urd crop. In other words, there was difference towards various practices in existing knowledge of respondent.

CONCLUSIONS

From the above findings it could be concluded that :

- i) Majority of farmers had average knowledge about improved package of practices of urd cultivation. More number of marginal farmers fell in low knowledge group as compared to small farmers.
- ii) Urd growing small and marginal farmers possessed comparatively more knowledge about fertilizer application, inter cropping and recommended spacing. Minimum knowledge was possessed in seed treatment, high yielding varieties and plant protection measures', Significant difference was observed in only four practices of urd cultivation viz; time of sowing, spacing, irrigation & weed management.
- iii) There was rank order correlation between knowledge possessed by urd growers both the zones.
- iv) There was difference in existing knowledge of urd growers towards different package of practices of urd

cultivation between the practices within the zone.

provision of availability of subsidised chemicals.

SUGGESTIONS

The non-adoption of plant protection chemicals resulting in heavy infestation of insect pests and diseases, untimely causing a grant loss to the crops. Therefore, field functionaries and scientists should educate and motivate to the farmers about the use of plant protection chemicals. Initially, there must be a

The educational approach will convince the farmers as improved cultivation of Urd is relatively more remunerative, better price fetching as compared to other crops. Thus, the extension education agencies including Agricultural University and the ICAR should give more attention in educating farmers during different training programmes for cultivation of Black gram.

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