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# Effectiveness of national mission on oilseeds and oil palm on knowledge level of recommended interventions of groundnut crop

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**Abstract**
The study was conducted in Sri Dungargarh and Bikaner panchayat samities of Bikaner district of Rajasthan. Two villages were selected from each selected panchayat samiti and 20 beneficiary and the equal number of non-beneficiary respondents were selected randomly from each selected village for the study. The findings revealed that the majority of (56.25%) beneficiary (63.75%) non-beneficiary groundnut growers had medium level of knowledge category whereas 27.50 percent beneficiary 15.00 percent non-beneficiary possessed high level of knowledge group. It was found that there was a significant difference in the level of knowledge between the beneficiary and non-beneficiary respondents about recommended groundnut interventions.

**Keywords:** Knowledge, interventions, NMOOP

## Introduction
Oilseed crops occupy of important position in the farming system of India. These are highly paying crops of the dry regions. Oilseed are rich source of fat and edible oils, have various uses for human being and animals. India is one of the major oil seeds grower and importer of edible oils. India's vegetable oil economy is world's fourth largest after USA, China and Brazil. National Mission on Oilseeds and Oil Palm (NMOOP) launched during 2014-15 envisages increasing production and productivity of oilseeds crops and oil palm through bringing in fallow areas under oilseed crops and diversification of area from low yielding cereals. It aims to achieve the required target by addressing major constraints to crop productivity through promotion of relevant technological interventions.

## Material and Method
The present study was conducted in Bikaner district of Rajasthan. The data were collected from randomly selected sample of the beneficiary and non-beneficiary respondents towards recommended interventions of groundnut crop introduced under the National Mission on Oilseeds and Oil Palm in two panchayat samities (Sri Dungargarh and Bikaner) of Bikaner district of Rajasthan. From each village 20 beneficiaries, who were benefitted under National Mission on Oil seed and Oil Palm in 2014-15 and equal number of non-beneficiary farmers were selected randomly separately. In total there were 80 beneficiary and 80 non-beneficiary groundnut growers. To measure the knowledge level of respondents, a knowledge scale was developed for this purpose. The respondent were awarded one score for each right answer and zero for each wrong answer. Therefore, the possible maximum obtainable knowledge score was 86 and minimum was zero. The mean and standard deviation of the entire respondent's knowledge score was computed for classifying the knowledge in low, medium and high categories. To determine the knowledge level of respondents about each major aspect mean percent score was worked out and ranked accordingly. Besides, to find out the significance of the difference in knowledge between different categories of respondents, Z-test was applied and conclusions were drawn accordingly.

## Result and Discussion
The results obtained from the present study as well as discussions have been summarized under the following heads:

### Distribution of the respondents according to their knowledge level regarding groundnut interventions:
Data shows in Table 1, (56.25%) beneficiary belonged to the medium level of knowledge

group followed by 27.50 percent respondents possessed high level of knowledge group and 16.25 percent respondents having low level of knowledge group of groundnut interventions. Further, in case of non-beneficiary respondents, 63.75 percent of them were possessed medium level of knowledge group followed by 21.25 percent of the respondents in low level of knowledge group, and only 15.00 percent of the respondents fell in high level of knowledge group of groundnut interventions. If we look the data irrespective of beneficiary and non-beneficiary groundnut growers, 60.00 percent were having medium level of knowledge group of groundnut interventions followed by 21.25 percent and 18.75 percent in high and low knowledge level groups respectively.

**Table 1:** Distribution of respondents according to their level of knowledge about groundnut interventions

| S. No. | Knowledge Level | Beneficiary (n=80) | | Non-beneficiary (n=80) | | Total (n=160) | |
|---|---|---|---|---|---|---|---|
| | | F | % | F | % | F | % |
| I | Low (<50 score) | 13 | 16.25 | 17 | 21.25 | 30 | 18.75 |
| II | Medium (Between 50 to 74 score) | 45 | 56.25 | 51 | 63.75 | 96 | 60.00 |
| III | High (>74 score) | 22 | 27.50 | 12 | 15.00 | 34 | 21.25 |

**Knowledge level of beneficiary and non-beneficiary respondents regarding groundnut interventions**

Table 2 shows that beneficiary respondents had very good knowledge (above 80 MPS) regarding "harvesting, threshing & storage", "time of sowing, seed rate & spacing", "field preparation", "irrigation management" and "seed treatment" with 89.69, 88.33, 87.71, 82.92, 81.61 MPS respectively. Similarly they had good amount of knowledge (above 60%) regarding "manure & fertilizer application", "high yielding varieties" and "weed management" with 77.06, 71.88 and 68.61 MPS, respectively, which were ranked sixth, seventh and eighth. Further, beneficiary respondents had less knowledge towards practices like "soil treatment" and "plant protection measures" with 57.50, and 56.53 MPS.

**Table 2:** Knowledge level of beneficiary and non-beneficiary respondents regarding groundnut interventions

| S. No. | Package of practices | Groundnut growers | | | |
|---|---|---|---|---|---|
| | | Beneficiary (n=80) | | Non-beneficiary (n=80) | |
| | | MPS | Rank | MPS | Rank |
| 1. | Field preparation | 87.71 | III | 84.17 | II |
| 2. | Soil treatment | 57.50 | IX | 40.83 | X |
| 3. | High yielding varieties | 71.88 | VII | 67.16 | VII |
| 4. | Seed treatment | 81.61 | V | 70.18 | VI |
| 5. | Time of sowing, seed rate & spacing | 88.33 | II | 86.04 | I |
| 6. | Manure & fertilizer application | 77.06 | VI | 72.06 | V |
| 7. | Irrigation management | 82.92 | IV | 75.42 | IV |
| 8. | Weed management | 68.61 | VIII | 62.22 | VIII |
| 9. | Plant protection measures | 56.53 | X | 50.14 | IX |
| 10. | Harvesting, threshing & storage | 89.69 | I | 83.44 | III |
| | Overall | 76.18 | $r_s$ = 0.94 | 69.17 | t= 7.75** |

MPS=Mean percent score
$r_s$= rank correlation
**significant at 0.01 level of probability

**Practice wise comparison of knowledge among beneficiary and non-beneficiary respondents about groundnut interventions**

An effort was also made to find out the practice wise difference between beneficiary and non-beneficiary groundnut growers. To find out the variation in the knowledge level of respondents 'Z' test was applied. The results are presented in Table 3.

It is clear from the data in Table shows that calculated 'Z' value was higher than the tabulated value at 1 and 5 percent level of significance in seven interventions of groundnut cultivation in three interventions *i.e.* field preparation, high yielding varieties and time of sowing, seed rate & spacing. The calculated 'Z' value was lower than the tabulated value.

**Table 3:** Practice wise comparison of knowledge between beneficiary and non-beneficiary respondents regarding groundnut interventions

| S. No. | Package of practices | Groundnut growers | | | | 'Z' Value |
|---|---|---|---|---|---|---|
| | | Beneficiary (n=80) | | Non-beneficiary (n=80) | | |
| | | Mean | SD | Mean | SD | |
| 1 | Field preparation | 5.26 | 0.96 | 5.03 | 0.84 | 1.83 $^{NS}$ |
| 2 | Soil treatment | 1.73 | 0.75 | 1.20 | 0.90 | 4.46** |
| 3 | High yielding varieties | 15.81 | 4.77 | 14.78 | 4.87 | 1.51 $^{NS}$ |
| 4 | Seed treatment | 5.71 | 1.28 | 4.74 | 1.70 | 4.56** |
| 5 | Time of sowing, seed rate & spacing | 5.30 | 0.91 | 5.09 | 0.85 | 1.71 $^{NS}$ |
| 6 | Manure & fertilizer application | 13.50 | 2.42 | 12.17 | 2.59 | 3.74** |
| 7 | Irrigation management | 2.49 | 0.53 | 2.30 | 0.46 | 2.61** |
| 8 | Weed management | 6.62 | 1.91 | 5.52 | 2.12 | 3.85** |
| 9 | Plant protection measures | 5.71 | 1.54 | 4.45 | 1.36 | 6.13** |
| 10 | Harvesting, threshing & storage | 3.59 | 0.57 | 3.38 | 0.77 | 2.21 * |
| | Overall | 6.57 | 1.56 | 5.87 | 1.65 | 3.10** |

NS = Non-significant, ** = Significant at 1% level of significance, * = Significant at 5% level of significance

Leading to conclusion that beneficiary farmers possessed more knowledge as compared to non-beneficiary respondents in the above mentioned seven interventions and overall knowledge also. In other words, there were no practices wise similarity between the knowledge of beneficiary and non-beneficiary farmers regarding groundnut cultivation practices.

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