Adoption gap of improved mungbean production technology by beneficiary and non-beneficiary farmers in Nagaur district of Rajasthan

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ABSTRACT
Pulses are the main source of protein particularly for vegetarians. Mungbeans can be consumed solely, or combined with rice to make khichari, or combined with vegetables and greens to make hearty soups or grind into flour to be used to make crepes or added to breads. Turmeric, cumin, dried ginger and coriander are some spices that work very well with mungbeans. The latest concept in this series is “Front Line Demonstration” which is new concept of field demonstration evolved by the ICAR with the inception of the technology mission on oilseed and pulses crops in mid nineteen eighty. The study was conducted in 12 FLD villages of four panchayat samities namely, Nagaur, Degana, Didwana and Merta panchayat samities of Nagaur district, adopted by the KVK, Nagaur were included and a sample of 75 beneficiary’s farmers were selected randomly. Similarly, 75 non-beneficiary farmers from 12 another non FLD villages from nearby areas of the adopted villages. It was found that the beneficiary farmers possessed maximum adoption gap regarding “Plant protection measures”, while least adoption gap was observed about the practices “Sowing of seed and spacing” of improved mungbean production technology. Whereas, the non-beneficiary farmers possessed maximum adoption gap regarding “Organic manure and fertilizer management”, whereas, the least adoption gap was found about “Sowing of seed and spacing” of improved mungbean production technology.

Key words: Adoption gap, Beneficiary and non-beneficiary, Mungbean, Production, Technology.

Pulses are the main source of protein particularly for vegetarians. Mungbeans can be eaten solely, or combined with rice to make khichari, or combined with vegetables and greens to make hearty soups or grind into flour to be used to make crepes or added to breads. Turmeric, cumin, dried ginger and coriander are some spices that work very well with mungbeans. The latest concept in this series is “Front Line Demonstration” which is new concept of field demonstration evolved by the ICAR with the inception of the technology mission on oilseed and pulses crops in mid nineteen eighty. The Front Line Demonstration is an important method of transferring the latest package of practices in totality to farmers. By which, farmers learn latest technologies of oilseeds and pulses production under real farming situation at his own field, which may lead to higher adoption. Further, these demonstrations are designed carefully where provisions are made for speedy dissemination of demonstrated technology among farming community through organization of other supportive extension activities, such as field days and farmers convention.

The study was conducted in 12 FLD villages of four panchayat samities namely, Nagaur, Degana, Didwana and Merta panchayat samities of Nagaur district, adopted by the KVK, Nagaur were included and a sample of 75 beneficiary’s farmers were selected randomly. Similarly, 75 non-beneficiary farmers from 12 another non FLD villages from nearby areas of the adopted villages. The data were collected with the help of pre- tested, reliable and valid schedule using personal interview technique. The collected data were coded, classified, tabulated and appropriate statistical tests were applied. The statistical tests applied were S.D., ‘z’ test, ‘t’ test and rank correlation.

The data in Table 1 depicts that the highest adoption gap (87.20 per cent) among beneficiary farmers was found about cultivation practices “Plant protection measures” of improved mungbean production technology, whereas the highest adoption gap (90.84 per cent) among non-beneficiary farmers was found about cultivation practices “Organic manure and fertilizer management” of improved mungbean production technology.

The second highest adoption gap (86.00 per cent) among beneficiary farmers was found about cultivation practices “organic manure and fertilizer management” while, among non- beneficiary farmers, the second highest adoption gap (90.54 per cent) was observed in practice “plant production measures” of improved mungbean production technology.

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technology. The third ranked was awarded to the adoption gap among beneficiary and non-beneficiary farmers about cultivation practices “Weed management “ of improved mungbean production technology with 84.12 and 88.67 per cent, respectively.

Fourth rank was assigned to the adoption gap (81.05 per cent) among beneficiary farmers was found about cultivation practice “Seed and soil treatment” whereas, the adoption gap (83.78 per cent) in non-beneficiary farmers was found about practice “soil and field preparation” of improved mungbean production technology. The fifth rank was awarded to the adoption gap (79.78 and 82.45 per cent) among the beneficiary and non-beneficiary farmers, respectively were found about cultivation practice “Harvesting” of improved mungbean production technology.

The sixth rank was awarded to the adoption gap (73.34 per cent) among beneficiary farmers was found about cultivation practices “Soil and field preparation” while the adoption gap (81.94 per cent) in non-beneficiary farmers was found about “Seed and soil treatments” of improved mungbean production technology.

The seventh rank was assigned to the adoption gap 70.00 and 76.67 per cent) among beneficiary farmers and non-beneficiary farmers, respectively were found about practices “storage” of improved mungbean production technology. The eighth rank was awarded to the adoption gap (69.34 and 71.34 per cent) among beneficiary and non-beneficiary farmers, respectively were observed in practice “High yielding varieties” of improved mungbean production technology.

The lowest rank was assigned to the adoption gap (66.00 and 70.89 per cent) among beneficiary farmers and non-beneficiary farmers respectively were observed in practice “sowing of seed and spacing” of improved mungbean production technology. These findings confirm the findings of Burman (2006), Sharma and Sharma (2007), Dwivedi et al. (2011) and Badhala et al. (2012).

The beneficiary farmers were having lesser adoption gap in comparison to non-beneficiary farmers about all the cultivation practices of mungbean. This might be due to the facts that the beneficiary farmers might have gained the more exposure and improved their knowledge and skill through these training, demonstrations, field days which encouraged for higher adoption gap lower down the adoption gap.

It might also be concluded that highest adoption gap was found about plant protection measures among beneficiary farmers which might be due to the facts that plant protection practices are complex practices and complexes practices increased the adoption gap and simple cultivation practices reduced the adoption gap.

CONCLUSION
It was found that the beneficiary farmers possessed maximum adoption gap regarding “Plant protection measures”, while least adoption gap was observed about the practices “Sowing of seed and spacing” of improved mungbean production technology. Whereas, the non-beneficiary farmers possessed maximum adoption gap regarding “Organic manure and fertilizer management”, whereas, the least adoption gap was found about “Sowing of seed and spacing” of improved mungbean production technology.

The adoption gap of improved mungbean production technology among beneficiary farmers was negatively and significantly associated with their education, training received and extension participation, farm mechanization index, while their, social participation, size of land holding, economic motivation were negatively and non-significantly associated, whereas their market distance was positively and non-significantly associated with their adoption gap of improved mungbean production technology among beneficiary farmers while, the adoption gap of improved mungbean production technology non-beneficiary farmers was negatively and significantly associated with their education, market distance, farm mechanization index while their size of land holding, training received, extension participation were negatively and non-significantly associated whereas their social participation.

### Table 1: Practice wise adoption gap of improved mungbean production technology among beneficiary and non-beneficiary farmers.

<table>
<thead>
<tr>
<th>Package of practices</th>
<th>Beneficiary (N, MPS)</th>
<th>Non-beneficiary (N, MPS)</th>
<th>Rank</th>
<th>Adoption gap</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soil and field preparation</td>
<td>26.66</td>
<td>73.34</td>
<td>VI</td>
<td>16.22</td>
</tr>
<tr>
<td>High yielding varieties</td>
<td>30.66</td>
<td>69.34</td>
<td>VIII</td>
<td>26.66</td>
</tr>
<tr>
<td>Sowing of seed and spacing</td>
<td>34.00</td>
<td>66.00</td>
<td>IX</td>
<td>29.11</td>
</tr>
<tr>
<td>Seed treatment and soil</td>
<td>18.95</td>
<td>81.05</td>
<td>IV</td>
<td>18.66</td>
</tr>
<tr>
<td>Organic manure and fertilizer management</td>
<td>14.00</td>
<td>86.00</td>
<td>I</td>
<td>9.16</td>
</tr>
<tr>
<td>Plant protection measures</td>
<td>12.80</td>
<td>87.20</td>
<td>I</td>
<td>9.46</td>
</tr>
<tr>
<td>Weed management</td>
<td>15.88</td>
<td>84.12</td>
<td>III</td>
<td>11.33</td>
</tr>
<tr>
<td>Harvesting</td>
<td>20.22</td>
<td>79.78</td>
<td>V</td>
<td>17.55</td>
</tr>
<tr>
<td>Storage</td>
<td>30.00</td>
<td>70.00</td>
<td>VII</td>
<td>23.33</td>
</tr>
<tr>
<td>Overall</td>
<td>22.57</td>
<td>18.16</td>
<td>V</td>
<td>81.90</td>
</tr>
</tbody>
</table>

MPS=Mean per cent score
and economic motivation were positively and non-significantly associated with their adoption gap of improved mungbean production technology among non-beneficiary farmers.

RECOMMENDATIONS
1. In view of the findings, it is suggested that scientists of K.V.K., should visit the field more frequently and assure that the adoption of all the practices (as a package) at the farmers’ field.
2. Front line demonstration programme may begin with wide publicity and may be conducted on all farmers fields instead of some selected farmers.

REFERENCES