Agriculture Program:
Sowing of Paddy in Punjab region

Punjab traditionally has been sowing paddy by transplanting paddy nursery. It has made huge progress in productivity in last 45 years and has been on the higher side in terms of yields and varieties. Being a Kharif crop, the sowing of nursery usually starts around mid May and it is ready for transplanting within 30 days. Most of Punjab transplants the nursery to fields using migrant labour from UP or Bihar. This costs about Rs. 2500 to 3500/- per acre. These are same for varieties with long or short period in the field.

Farmers are mostly sowing Pusa 44 a long variety of paddy that matures in 160 days. However, PAU, Ludhiana has been advising farmer against long varieties and has been promoting PR 126, 128, 129 or 121 under short varieties that matures in 110 to 140 days on an average. In 2019, due to early sowing date set by the govt. most farmers again resorted to sowing PUSA 44.

Now as the paddy season approaches, due to the lockdown, farmers are at a major decision making junction as to which variety to sow and what method to use and both will have a big impact on their overall income from this year’s crop. For farmers following the traditional sowing method, farmers can sow either of the long or short varieties. Many farmers...
have the long variety PUSA 44 seeds stored already. This may save them cost of seeds procurement. However, the unavailability of migrant labour, poses a bigger cause of concern, the farmers are entirely dependent on the local labour. The cost of using local labour may be 2 times of their usual expenditure.

Many big farmers have shown interest in machine transplanting of paddy. However, there may not be enough machines to support timely transplanting.

**Mounted Paddy Transplanting Machine**

*Punjab Govt. imported transplanting machines and were given to farmers on subsidy. However, farmers complained about their functioning or feasibility. The manual or the motorised transplanting machines cost anywhere between 2lacs to 14.5 lacs and they cost only 500 to 1000 per acre for sowing. Punjab farmers are known to be enterprising and frequently come up with local versions of farm equipment or modifications. Many farmers have already worked out these alterations and modifications.*

**Direct Sowing of Paddy**

The rapidly depleting water table across Punjab has been a cause of concern. Despite the govt, efforts there is little or no traction on the issue among the local population in Punjab. The long-term perception of abundance of water in the minds of the locals has hampered the efforts of govt. or non-govt. agencies on

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### Form a connect with...

*Farmer Jaspal Singh of village Surajpur, Tehsil Nabha who takes us through the Traditional & Direct Sowing Methods & how Direct Sowing, which is extremely beneficial, is gaining popularity due to shortage of labour*

<table>
<thead>
<tr>
<th>Crop Aspects</th>
<th>Traditional Sowing</th>
<th>Direct Sowing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Successful varieties</td>
<td>Long as well as Short Duration varieties</td>
<td>Short varieties more successful</td>
</tr>
<tr>
<td>Seed Requirement</td>
<td>4-5 kg per acer</td>
<td>8 kg per acer</td>
</tr>
<tr>
<td>Availability of Seed</td>
<td>Stored Seeds available from Previous year Crop</td>
<td>Surge in demand may cause farmers to procure seed from market at 2-3 times the price</td>
</tr>
<tr>
<td>Nursery preparation</td>
<td>Nursery required</td>
<td>Seeds are directly sown</td>
</tr>
<tr>
<td>Manual Sowing</td>
<td>Labour Intensive</td>
<td>Minimal Labour Required</td>
</tr>
<tr>
<td>Machine Sowing possible</td>
<td>Yes, specialized rice transplanter required</td>
<td>Yes, regular tractor with rice sowing attachment</td>
</tr>
<tr>
<td>Cost of Equipment</td>
<td>Manual rice Planter- 2.5 -3lacs, Motorized - 14 lacs</td>
<td>Direct Sowing Attachment - 70-80 thousand</td>
</tr>
<tr>
<td>Govt. subsidy available on Machinery</td>
<td>40-50%</td>
<td>40-50%</td>
</tr>
<tr>
<td>Consumption of Water</td>
<td>Heavy Consumption of Water</td>
<td>60% less water consumption</td>
</tr>
<tr>
<td>Yield</td>
<td>3 tons per acer</td>
<td>3 tons per acer</td>
</tr>
</tbody>
</table>
conservation of water resources and use of farming techniques that reduce water consumption. Punjab Agriculture University, Ludhiana and Krishi Vigyaan Kendra across Punjab have been promoting Direct sowing of paddy for the past 6-7 years along with rice varieties with shorter production cycle. Direct sowing of paddy doesn’t require nursery or transplanting and can be sown directly with the tractor and plough like other crops. Direct sowing needs little or no labour expense and uses almost 60 percent less water as compared to the traditional sowing methods. Various inhibitions among the farmers has caused very low uptake of this method and farmers have continued to follow traditional method. Direct sowing costs an average of Rs. 1000 per acre. Farmers planning to use direct sowing method may have to procure new seeds and the long variety are known to have low yield in this method.

Choosing the variety may be a very critical choice this year, particularly due to the unavailability of seeds in the market. Farmers get their Paddy seeds mostly from PAU or Krishi Vigyaan Kendras. Many farmers store their seeds from the current year’s crop for use next year. If the farmers go for the traditional sowing method they may save on the cost of seeds, which is anywhere between 700 to 1000/- per acre and spend on local labour or a paddy transplanting machine.

If they intend to use direct sowing they save majorly on the labour costs however rely on buying seeds for the open market. Availability of seeds in the open market has also become a cause of concern for farmers. Based on farmer feedback, the seeds for shorter varieties are available in the open market at rates 2 or 3 times higher than previous year. Several farming experts, professors from PAU and Krishi Vigyaan Kendra across Punjab are tirelessly working towards promoting sustainable practices and guidelines to help farmers make the difficult choice.

The Nabha Foundation Sustainable Agriculture Program ‘Navi Disha’ in Mansa Punjab, Vedanta-TSPL CSR Initiative

“What Makes Me Happy”

Farmer Kuldeep Singh, Village Raipur

Covid-19 pandemic has impacted all of us. Shortage of labour and supplies has brought in new problems which we are trying to deal with. Also at this moment, it is very important for us to protect ourselves, our family and the entire community from this disease of which, as of now, is no cure.

It makes me happy to say that ‘The Nabha Foundation’ and ‘TSPL’ have proactively taken action and distributed safety kits to the farmers. The kit comprises of required essentials; masks & soap bars which are greatly needed. This gesture has spread awareness on the severity of the situation and how simple measures can help us protect ourselves.

In our next issue, we talk about ‘Online Trainings’ conducted for our various programs...
Talking Through Pictures.....

The Nabha Foundation Agriculture Program

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We apologize for any errors or omissions