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Research Note

Training need of true potato seed (TPS) growers of Tripura

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SUMMARY : The study was conducted in Khowai district to find out the training need of true potato seed (TPS) growers of Tripura. The TPS growers in the main areas of training need perceived that plant protection measures as their first and top most required training need indicating its percentage, *i.e.*, 85.00 per cent followed by manures and fertilizer management (72.50 %) and seed treatment (67.50 %) which received 1st, 2nd and 3rd rank, respectively. It was also found that the perceived sub areas by respondents were awareness about use of various insecticide and pesticide as the top most relative need indicating 93.33 per cent with 1st rank followed by the identification of major insect pest and disease (91.67 %) and cause of spread (85.83 %) which received the 2nd and 3rd rank, respectively.

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North east India consists of 8 states, *viz.*, Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura. Compared to national average of 18.2 t/ha, potato yield in the NE states except Tripura (19.7 t/ha) has been all time low (4.2- 8.3 t/ha). The low potato yield in the NEH region could be attributed to many factors. However, per capita availability of potato in the region is higher than the national level (Singh *et al.*, 2003). Potato is one of the important crop grown in Tripura. The significance of this crop to the rural economy as well as agriculture of the state could be comprehended from the fact that potato occupies more than 5717 thousand hectare of land which accounts for 110 thousand MT productions (FIB, 2008). Though figures are satisfactory even then farmers are facing big loss in terms of yield. The main reasons for the low potato yields are adequate and untimely availability of essential crop inputs like healthy seed, fertilizers, pesticides etc. coupled with poor management practices followed by the growers. Prevalence of serious diseases like late blight, brown rot/ bacterial wilt, etc., is also responsible for low productivity in the region.

Tripura is a land locked state; hence, non-availability and high cost of healthy planting materials (tubers) have been recorded as the main constraint for increasing production and productivity of potato. To overcome this, TPS could be an alternative technology to increase productivity and reduce the cost of potato production because, it has many advantages over the conventional seed tuber, among which the mentionable are, a) cost effectiveness, b) less seed rate, c) disease free seed, d) resistant to late blight, e) higher yield, f) negligible transportation cost etc. The present production of potato could be increased considerably if the available technology is effectively transferred to the farmer. Our training programme need to focus more on transferring of new technology from the confines of laboratories and research institute to the farmers and make then result oriented. Keeping all these aspects in view, the present study was undertaken to ascertain the training needs of TPS growers in the main areas of training with respect to improved potato cultivation and

to know the training needs of potato growers in the sub areas of plant protection measures.

The study was conducted in Khowai district of Tripura with 120 randomly selected true potato seed (TPS) growers. A structured schedule was prepared containing different areas related to TPS cultivation which was administered to the sample selected for the study. The frequency and percentage were calculated and the training need areas were ranked based on the percentage.

Training need of TPS growers in the main areas of training:

The result related to training need of true potato seed (TPS) growers in the main areas of training need presented in Table 1 reveals that majority of the respondents perceived that plant protection measures as their first and top most required need for the training indicating its percentage, *i.e.*, 85.00 per cent which received 1st rank followed by training need on manures and fertilizer management (72.50 %) and seed treatment (67.50 %) which received 2nd and 3rd rank, respectively. The sowing method and sowing time was observed as the forth rank area with 63.33 % followed by weed management (42.50 %), storage (38.33 %), irrigation and drainage (34.17 %) and marketing (24.17 %) with 5th, 6th, 7th and 8th rank, respectively. These areas were considered as least needed areas among the TPS growers. In fact potato crop is often affected by certain diseases and pest. So, obviously it was the reason perceived by the respondents that plant protection measures as the first area for training need. Similar findings were also reported by Chawang and Jha (2010).

Training need in the sub areas of plant protection measures:

The findings related to training need in the sub areas of plant protection are presented in Table 2. Data presented in Table 2 reveal that TPS growers were perceived the sub area of awareness about use of various insecticide and pesticide as the top most relative need for the training indicating 93.33 per cent with 1st rank followed by the sub area of identification of major insect pest and disease (91.67 %) and cause of spread (85.83 %) which received the 2nd and 3rd rank, respectively. The time and method of control (81.67 %), residual effect of insecticides and pesticides (77.50 %), handling of plant protection implements (75.00 %) and preparation of pesticide solution (74.17%) which received 4th, 5th, 6th and 7th rank, respectively. Among different aspects of identification of plant protection, control of diseases has always possessed major challenges before the potato

Table 1: Training need of TPS growers in the main areas of training **(n= 120)**

Sr. No.	Main areas of training	Frequency	Percentage	Rank
1.	Seed treatment	81	67.50	III
2.	Sowing method and sowing time	76	63.33	IV
3.	Manures and fertilizer management	87	72.50	II
4.	Irrigation and drainage	41	34.17	VII
5.	Weed management	51	42.50	V
6.	Plant protection measures	102	85.00	I
7.	Marketing	29	24.17	VIII
8.	Storage	46	38.33	VI

Table 2: Training need of TPS growers in the sub areas of plant protection measures **(n= 120)**

Sr. No.	Main areas of training	Frequency	Percentage	Rank
1.	Identification of major insect pest and disease	110	91.67	II
2.	Cause of spread	103	85.83	III
3.	Time and method of control	98	81.67	IV
4.	Awareness about use of various insecticide and pesticide	112	93.33	I
5.	Preparation of pesticide solution	89	74.17	VII
6.	Handling of plant protection implements	90	75.00	VI
7.	Residual effect of insecticides and pesticides	93	77.50	V

growers. Once the disease appears on the crop yield is drastically reduced. Therefore, the potato growers felt the need for training in measure to control the disease. The study is in line of Sing and Arneja (2005) and Verma and Ansari (2013).

Conclusion:

It may be concluded from the above findings that the knowledge gain of TPS growers need to be enhanced through focused training priority on plant protection measures of their crops. These includes primarily on the use of time specific fungicides and insecticides, proper identification of particular pests and diseases and their nature of spread etc. Farmers are not getting optimum assured profit due to lack of sufficient knowledge with respect to above mentioned identified top reasons as well as its application in their field. So, it is utmost necessary that the agricultural extension workers, through regular trainings on plant protection measures with the TPS growers should guide the farmers to get optimum yield per unit area by effective management against pests and diseases.

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