Adoption of chemical fertilisers in orchards of mid-hills in J&K state

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ABSTRACT: The study was conducted in district Ramban of J&K state with 60 respondents selected from 6 villages under the district using random sampling. The study revealed that majority of respondents (63.3%) used recommended nitrogen source of fertilizers in their orchards. The percentage of farmers using recommended dose of phosphorus fertilizers was very low (21.6%). The major constraints in adoption of chemical fertilizers in orchards were lack of knowledge of fertilizers (76.66%) and non-availability of fertilizers (66.66%).

KEY WORDS: Chemical fertilisers, Mid-hills, Orchards

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The agro climatic conditions of the state of J&K vary from sub-tropical to temperate and cold deserts making the state suitable for growing temperate to sub-tropical fruits. The hilly district of Ramban too possesses an agro climate which is suitable for growing temperate fruits like apple, pear, plum, apricot, almond and walnut etc. Horticulture occupies an important place in this hilly district of J&K state because it is the only vocation which helps to overcome inherent problem like low land to man ratio, undulating topography, lack of irrigation facilities, uncertain rains, excessive soil erosion and low cereal crops productivity. Despite of being a horticulture dominant state, the productivity of horticulture products has remained lower than that in other developed countries. There are so many factors which contribute to higher productivity and chemical fertilizers are one of the most critical inputs among them. Among the various factors contributing towards the poor productivity levels, inadequate knowledge of fertilizers, low adoption and non-availability of chemical fertilizers play a major role. Keeping this in view, a study was undertaken to find out the level of adoption of chemical fertilizers among the farmers and constraints in its adoption in the orchards.

RESEARCH METHODS

The study was conducted in 6 villages of district Ramban in J&K state. The villages were selected randomly. The total number of subjects were 60 for the study. Teacher made type schedule was developed with the help of horticulture and extension specialists having deep interaction with the farmers. The farmers were interviewed during 2010. The collected data were pooled, tabulated and analysed. In the present study, nature, recommended dose of a particular fertilizer and time of application were considered and decision and choice of the respondents about them were analyzed.

RESEARCH FINDINGS AND DISCUSSION

The data presented in Table 1 revealed that 60 per cent of small farmers and 70 per cent of large farmers applied nitrogen as per recommendation while 27.5 per cent of small farmers and 30 per cent of large farmers applied nitrogen less than recommended dose. However, 5 per cent of small farmers did not apply nitrogen source to the plants which is very low. This might be due to popularity of nitrogenous fertilizers among the farmers and their easy availability and low cost as compared to other fertilizers.

The data presented in Table 2 indicated that 12.5 per cent of small farmers and 40 per cent of large farmers applied phosphorus as per recommended dose and 37.5 per cent of small farmers and 50 per cent of large farmers applied phosphorus less than recommended dose. No one applied...
more than recommended dose. The percentage of farmers not applying the phosphatic fertilizers was quite high i.e. 36.66. This might be due to lack of knowledge about the usefulness of this fertilizer and great shortage and non availability of this fertilizer.

The data presented in Table 3 revealed that 80 per cent of small farmers and 60 per cent of large farmers did not apply potassic fertilizers. However, 20 per cent of small farmers and 40 per cent of large farmers did apply potassic fertilizers though it was less than recommended dose. However, the percentage of farmers not applying the potassic fertilizers is quite high i.e. 73.33.

**Conclusion:**

It was found that 76.66 per cent of farmers did not have knowledge about the usefulness, dose and time of fertilizer application. The second constraint was non-availability of fertilizers in time. About 66.66 per cent of farmers reported this problem. Lack of money was reported as third ranking constraint for application of fertilizer. About 63.33 per cent of farmers did not apply fertilizer due to lack of money specifically majority of small farmers. High cost of fertilizers and lack of irrigation facilities were also constraints for lower application of fertilizer by 63.33 and 60 per cent of farmers, respectively. The constraint of high cost of fertilizer was felt more by small farmers.

Majority of farmers were found using nitrogen source only to fulfill the fertilizer needs of plants. The phosphatic fertilizers were used in very less doses. The use of potassic fertilizers was very meagre. Moreover, the phosphatic and potassic fertilizers were not used in proper time while in case of nitrogen it was not applied as per standard method developed. Main constraints in low adoption of chemical fertilizers were lack of knowledge, non availability of fertilizers at the right time, lack of money, high cost of fertilizers and lack of irrigation facilities. This suggest that there is a great need for educating the farmers about importance, schedule, method and time of application of fertilizers in fruit trees. Similar investigation on adoption of chemical fertilizers in mustard was carried out by Singh (2002).

**REFERENCES**


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