



Research Note

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Comparative yield potential of freshly harvested *Kharif* potato when treated with GA₃ under open and protected conditions to grow a *Rabi* seed potato crop

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Potato, an important vegetable crop grown throughout the world and is used directly or indirectly for food. Growth of crop plants can be altered in beneficial ways using growth substances. GA₃ is reported to break dormancy of tubers by single treatment while GA₃+thiourea as double treatment is also used for breaking the dormancy. Since *Kharif* potato is harvested in the month of June in the hills, sprouting is the main problem and it is very difficult to utilize this produce as potato seed tubers. Keeping this in mind, an experiment was under taken by using GA₃ and thiourea to break the dormancy of freshly harvested *Kharif* potato and planted both under open and protected conditions. Efforts were, therefore made to determine the comparative yield potential of potato seed tuber of different potato varieties and to select a variety capable of giving economic seed yield in the *Rabi* season under temperate conditions.

RESEARCH METHODS

Five different varieties of potato namely Kufri Jyoti, Kufri Giriraj, Gulmarg Special, Shalimar Potato-I and Shalimar Potato-

II. The tubers weighing nearly 30 g were given a cut at the basal end. The tubers were then put in 1 per cent thiourea solution for 1 hour and then GA₃ for 15 minutes. These tubers were then put in pots containing sand which was kept moist by sprinkling water. It took 7 to 10 days for sprouting of tubers. The tubers were then planted in RBD in 3 replications in a plot of 2x2m with planting distance of 45x20 cm both under open conditions and polyhouse conditions. Recommended package of practices for the region was followed. The trails were laid on 11-08-2011 and harvested on 08-12-2011. The auxiliary parameters like plant height, plant spread, no. of shoots per plant, average yield per plant, on the basis of five randomly selected plants per replication and tuber yield on m² basis was recorded. The number of tubers per m² were categorized in three sizes namely small having an average wt. of less than <26 g, medium 26-75 g and big as >75 g.

RESEARCH FINDINGS AND DISCUSSION

Maximum plant height (Table 1) was recorded by K. Giriraj followed by Gulmarg Special under open conditions where as