



Research Note

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Tuber size and yield of potato in relation to different dates of planting

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Seed is the costliest input in potato production, and the quantity of seed used for planting is an important factor. The time of planting determines the length of the growing period of a seed crop which influences the yield and tubers size in the produce. The present investigation was, therefore, undertaken to study the effect of planting in recently developed varieties namely Shalimar potato-1, Shalimar Potato II and commercial varieties of potato *viz.*, Kufri Jyoti, Kufri Giriraj and Gulmarg Special. The tuber seed thus obtained was stored under cold storage in Walk in cool chamber for the seed crop in next *Kharif*.

Five varieties were planted in randomized block design with three replication (plot size 3 x 3 m) at 45 x 30 cm inter and intra row spacing's at vegetable Experimental Area SKUAST-K during 2010-2011 *Kharif*. The soil was sandy loam and recommended fertilizer doses 150 kg N, 100 kg P and 100 kg K₂O/ha and normal intercultural operation were taken. The tubers produced first through potato tissue cultures and mini-tubers having a size of less than 24 g produced under protected conditions in the polyhouses were planted as whole tubers on three different dates *viz.*, 10-03-2011, 02-04-2011 and 25-04-2011. Data on number of above ground stem/plant was recorded after 60 days of planting. At harvest time data on

number of potatoes/plant, tuber yield/plant and number of tubers/m² were categorized in three grades *viz.*, small < 26 g, medium 26-74 g and large >75 g and the data were statistically analyzed. Considerable differences were seen in the number of tubers/m² from five different varieties. Kufri Jyoti recorded higher number of medium sized seed tubers when planted on 10th March followed by Kufri Giriraj, G. Special, Shalimar Potato-I and Shalimar Potato-II (Table 1). No significant differences were found in number of tubers obtained from three different dates. However, significant differences in terms of yield of medium sized tubers was observed among the different dates. Regarding no. of stem/plant maximum number of stems per plant *i.e.* 6.33 was observed in Gulmarg Special when planted on 10-03-2011 followed by Shalimar potato-I. The least number of stolons/plant were observed in all the varieties when planted on 22-04-2011 (Table 2). Significant variation was observed in number of potatoes per plant and fresh tuber weight per plant. Among the varieties Kufri Jyoti recorded maximum number of tubers followed by Kufri Giriraj and Shalimar Potato-I and similar trend was observed when planted on 02-04-2011. Similar observations were reported by Patel *et al.* (2000) and Singh and Kashyap (1991). The variation in yield may be because of differential genetic potential. More over significant differences