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## Effect of different dates of planting on growth and yield performance of sweet potato (*Ipomoea batatas* L.) under Dharwad condition

■ T.B. ALLOLLI, S.I. ATHANI<sup>1</sup> AND S.J. IMAMSAHEB<sup>1</sup>

### Associated Authors:

<sup>1</sup>AICRP on Tuber Crops, Regional Horticultural Research and Extension Center, Kumbapur, DHARWAD (KARNATAKA) INDIA

### Author for correspondence :

T.B. ALLOLLI

AICRP on Tuber Crops, Regional Horticultural Research and Extension Center, Kumbapur, DHARWAD (KARNATAKA) INDIA

**Abstract :** Sweet potato (*Ipomoea batatas* L.) belonging to the family Convolvulaceae is one such important starchy root tuber food crop of tropical and subtropical countries. In southern part of United States, it is popularly known as 'white potato' or 'Irish potato'. It is popularly called as 'Sakarkand' in India. Its high yielding ability can go a long way in solving the food needs of ever increasing population. The adaptation of this crop to marginal environments, its contribution to household food security and its greater flexibility in mixed farming systems emphasise its significance in the welfare of the rural poor. Hence, the present investigation was carried out during the year 2010 – 2011 at Regional Horticulture Research and Extension Center, Kumbapur, Dharwad, to know impact of different dates of planting in sweet potato. The experiment was laid out using Random Block design with total 12 treatments and 3 replications, result revealed that sweet potato planted at 10<sup>th</sup> of June recorded significantly higher vine length (183.78 cm), number of shoot per vine (5.79), fresh weight of the vine (8.93 kg), tuber yield per plot (19.29 kg) and yield (26.79 tons per ha). And this was followed by planting during 1<sup>st</sup> of June.

**Key words :** Sweet potato, Different dates of planting, Growth, Yield

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Sweet potato is one of the important crops of tropical and subtropical countries and temperate climatic zones that are frost free in the world. It is the seventh most important food crop in developing countries and produces more calories than rice, wheat and maize per hectare per day. This is a crop bestowed with photosynthetic efficiency and ability to accumulate calories and nutrients in tubers. Among the Asian countries, China rank first in area and production, and account 80 per cent of the world's production, the rest of contribution being from Japan, Vietnam, Uganda, India, Indonesia and Korea. India is the largest sweet potato producer in South Asia and occupies sixth position in the world in an area of 0.14 million hectare with an annual production of 1.7 million tonnes and the productivity of 8.3t/ha (Edison, 2001), which is more than half of the world average. In India the districts of Orissa, Bihar and Uttar Pradesh account for 89 per cent area and 88 per cent production. (Edison, 2002). This crop is the principal source of starch and

contains 15-28 per cent starch and 3-6 per cent sugar (Harvat *et al.*, 1991). The red skinned sweet potato contains anthocyanin pigment, which are dicaffeoyl derivatives of cyaniding and peonodin-3-glycosylglucoside. The major amino acids available in total protein are valine, leucine, isoleucine, arginine and lysine (Purcell and Walter, 1982), the peel contains more protein than the flesh. The digestive energy value of sweet potato has been reported to be 3490kcal/kg, which is almost comparable with maize which is 3837kcal/kg (Kay, 1973).

It was grown in more than 100 countries as important sources of carbohydrates, vitamins A and C, fiber, iron, potassium, and protein (Woolfe, 1992). In developing countries, sweet potato is especially valued because it is highly adaptable, and tolerates high temperatures, low fertility soil, and drought. Sweet potato is also used as animal feed, which has been a byproduct of crops grown for human consumption. Increasing recognition of the great potential of the sweet potato crop as a nutritious