



Research Paper

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Evaluation of different sweet potato [*Ipomoea batatas* (L.) Lam] genotypes for growth yield and sweet potato weevil incidence

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ABSTRACT : A field experiment was conducted during 2009-010 and 2010-11 at Regional Horticulture Research and Extension Center (RHREC), Dharwad (Karnataka) for evaluation of various sweet potato [*Ipomoea batatas* (L.) Lam] genotypes for growth yield parameters and incidence of sweet potato weevil. The pooled data of two year revealed that, the genotype IGSP-13 has recorded higher yield per plot (27.34 kg) and per ha (37.98 t/ha). Genotypes viz., HUB-28 (33.05t/ha), HUB-8 (32.88t/ha), HUB-11 (31.64t/ha) and HUB-12 (31.06t/ha) were found at par with each other. Significantly lower yield per ha was noticed in HUB-22 (15.13 t/ha). Per cent weevil infestation varied with different genotypes, the highest being in HUB-1 (53.72%), while lowest infestation was recorded in HUB-12 (9.88%).

KEY WORDS : Sweet potato, *Ipomoea batatas*, Growth, Yield

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Sweet potato [*Ipomoea batatas* (L.) Lam] is a starchy root crop grown through out the tropics, subtropics and warmer temperate regions. It produces higher yield per unit area per unit time even in marginal lands (Nedunchezhiyan and Byju, 2005). Sweet potato assumes special significance among the tuber crops on account of its acceptability as a food, feed and fodder crop (Nedunchezhiyan and Srinivasulu Reddy, 2002). Apart from tuberous root, aerial tops also serve as fodder for livestock (Nedunzhiyan, 2001) as well as direct and indirect human food (Woolfe, 1992). The aerial tops also serve as human food in the sweet potato vine-animal-human food chain (Duell, 1989). Sweet potato is found an alternative fodder for livestock. In terms of chemical composition and digestibility, sweet potato forage is superior to most of grass forages (Olorunnisomo, 2006). The crude protein content of the forage ranges from 18-30 per cent, while the crude fibre content is about 18 per cent (An *et al.*, 2003). With a dry matter digestibility of 70 per cent and above (Foulkes *et al.*, 1978; Nedunzhiyan, 2001).

Sweet potato vine is an ideal fodder for livestock. However, the vines of the crop grown for tuber purpose may

contain less amount of crude protein and other minerals due to a preferential partitioning to the roots. The crop has high photosynthetic efficiency and chief source of energy. Among the Asian countries, China ranks first in area and production and accounts 80 per cent for the worlds production, while the rest of the contribution is 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 with an area of 0.124 million hectare, annual production of 1.12 million tonnes and the productivity of 9.01t ha⁻¹ (CMIE 2010), which is more than half of the world average. In India, Orissa, Bihar and Uttar Pradesh account for 39.5 per cent area and 37 per cent production. (CMIE 2010). This crop is principal source of starch and contains 15-28 per cent starch and 3-6 per cent sugar (Harvat *et al.*, 1991). Keeping in view of the above, present investigation aimed to evaluation fifty three sweet potato genotypes with regard to growth yield and per cent weevil incidence.

RESEARCH METHODS

A field experiment was conducted at Regional Horticulture