

PERFORMANCE OF SIX SWEET POTATO VARIETIES IN SANDY REGOSOLS OF THE BATTICALOA DISTRICT

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Sweet potato (*Ipomoea batata*) is a popular crop in the Batticaloa district and is grown in a range of soil types. The damage caused by tuber weevil (*Cylas formicarius*) is considered a serious problem in the cultivation of this crop. The farmers in the Batticaloa district are cultivating local varieties which are inherently with low yields and poor quality. These varieties in most cases failed to produce tubers when grown during the dry seasons. On the whole, the unavailability of suitable varieties of sweet potato forms a serious limitation in the expansion of this crop. In view of the above foreseen facts, an evaluation of the sweet potato varieties was carried out to identify the potential varieties for this production environment.

Six sweet potato varieties received from the Department of Agriculture (DOA) were tested on light sandy soil (regosol) during the dry season at the Agronomy farm, Eastern University located in the agro-ecological region DL₂. The experiment was in RCBD and managed, in accordance to recommended practices of the DOA. The data gathered were statistically analysed to determine the level of significance.

The highest tuber yield of 21.1mt/ha was obtained from the sweet potato variety 'Ranabima' closely followed by the varieties 'Wariyapola white' (19.8mt/ha) and 'Gannoruwa white' (17.2mt/ha). All these three varieties

ies were statistically equal in tuber yields ($p < 0.05$). The harvest index (HI) was the highest (42.3%) for 'Ranabima' and lowest for 'Wariyapola red' which failed to produce tubers. Among the varieties that set tubers, 'CARI 426' had the lowest HI of 7.2%. The damage by tuber weevil ranged from 31-51 per cent, which is considered the most important character of economical value. The highest yielding sweet potato variety 'Ranabima' showed the least damage by weevils (31%) and highest level of damage was found in 'Wariyapola white' (51%). 'Gannoruwa white' was also found to be susceptible to the weevil (46%).

By and large, the sweet potato variety 'Ranabima' appeared to be the most suitable variety to grow during the dry season in the Batticaloa district. This variety is also less attacked by tuber weevil. Hence, 'Ranabima' is a potential sweet potato variety for this production environment.