



Thesis EFFECTS OF STEM CUTTING LENGTHS ON GROWTH AND YIELD OF THREE CASSAVA VARIETIES IN THE EARLY AND LATE RAINY SEASONS

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Abstract

The field experiments on cassava were conducted in farmer's field, at Tumbon Lad Takien, Amphor Kabinburi, Changwat Prachin Buri, in the early and late rainy seasons (ER and LR, respectively) during April 2001 to September 2002. A 3 x 3 Split Plot in RCB with 4 replications was used. Three cassava varieties, namely; Kselsart 50, Huaibong 60 and Rayong 5 were mainplots and the lengths of stem cutting (20 30 and 40 cm.) were subplots. The objective of these experiments was to investigate the effects of stem cutting lengths on growth and root yield of three cassava varieties when planted in the early and late rainy seasons.

The results revealed that the germination in the ER season was better than the LR season. Kasetart 50 and Rayong 5 germinated better than Huaibong 60. In the ER season, stem cutting at all lengths, in this study, can be used because the germination percentage of them are nearly the same, but in the LR season the 30 - and 40 cm stem cutting germinated better than the 20 -cm stem cutting. The average number of shoots/plant in ER season was more than the LR season Rayong 5 and Huaibong 60 gave more shoots/plant than Kasetart 50 in both seasons. The 30 -cm and 40 -cm stem cutting in the ER season gave more shoots than 20 -cm stem cutting, whereas the shoot number of the three stem cutting lengths were the same in the LR season. Although the average root numbers/plant in the ER season was more than the LR season but the lengths of stem cutting did not affect the root numbers/plant in both seasons.

The fresh root yield in the LR season (5,497.3 kg/rai) was higher than the ER season (5,040.9 kg/rai). The same was true for dry root yield. Huaibong 60 gave the best yield in both seasons, but the lengths of stem cutting did not affect the fresh and dry root yield/rai. However the root starch content in the ER season (25.3%) was higher than the LR season (24.4%). Kasetart 50 and Huaibong 60 gave higher starch content than Rayong 5 in the ER season, but in the LR season Kasetart 50 gave the highest starch content. Although in the ER season the 40 - cm stem cutting gave greater starch percentage than 30 -and -20 cm stem cutting lengths but in the LR season the 20 -cm stem cutting gave the greatest starch percentage.