LATEX IN DIFFERENT SWEETPOTATO (IPOMOEA BATATUS) VARIETIES AGAINST CYLAS FORMICARIUS INFESTATION

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Adults and larvae of sweet potato weevil, SPW (Cylas formicarius F.), destroy both tuber and vine of sweet potato (Ipomoea batatas L.) and cause serious yield loss at harvest and in storage. Latex is a possible defence mechanism against SPW infestation. A randomised complete block design with split split plots and 4 replicates was used. The main plots were nine sweet potato varieties, sub-plots were different ages (1, 2, 3 and 4 months after planting) and sub-sub-plots were latex contents obtained from vine cuts at 10, 20 and 30 cm above soil surface at which points the number of SPW wounds were observed and counted. The samples of fresh latex were weighed, dried at 60°C for 10 h and re-weighed. Latex contents were significantly different between the varieties at all ages and all heights. All varieties showed the highest latex content at the proximal end (30 cm) and decreased towards the basal ends. As sweet potato age increased, the latex content at each level decreased (P<0.01). The number of wounds was negatively correlated with both fresh and dried latex content weight ($r^2=-0.712$ and -0.585 respectively, P<0.01), indicating that when latex content was high, SPW infestation was low. This study showed that latex was one of the important resistance factors against SPW infestation.