

Effects of feeding angles and cutting speeds of a mower knife with serrated edges on the pulverization of sweet potato vines

ABSTRACT

A study was conducted to test the effects of three different speeds of 1830, 2066 and 2440 rpm of a mower knife with serrated edges and two different feeding angles of 45° and 90° on the pulverization of sweet potato vines. The results indicated that all the treatments were significant at 99% significance level for the pulverized percentage of sweet potato vines remaining on the sieve. The best result was for the 45° feeding angle with lowest vine pulverized percentage of 47.20%. The second speed of 2066 rpm had the finest vine pulverized percentage of 57.47%. The best performance for overlapping effect between feeding angle and speed of mower was achieved by the 45° feeding angle and a mower speed of 1830 rpm resulting in an average percentage of 44.45 % of pulverized vines.

Keyword: Chopping; Feeding angle; Mower; Slasher; Speed; Sweet potato