

ABSTRACT

Sweet corn (*Zea mays* var. *saccharata* Sturt) is an important food crop, ranking third globally after wheat and rice and serving as a major staple food in Indonesia. Increasing sweet corn yields can be achieved through proper cultivation techniques, such as pruning, supported by adequate nutrient availability through fertilization. The study aimed to determine the effect of pruning and the application of goat manure on the growth and yield of sweet corn. To evaluate these effects, a two-factor randomized block design (RBD) with three replications was used. The first factor, goat manure, consisted of three levels: K0: 0 tons/hectare (control), K1: 35 tons/hectare (8.82 kg/plot), K2: 40 tons/hectare (11.34 kg/plot). The second factor, leaf pruning, consisted of three levels: P0: No pruning, P1: Pruning of 2 leaves, P2: Pruning of 4 leaves. The results of the study show that goat manure treatment affects the following variables: plant height at 2–6 MST, stem diameter at 4–6 MST, number of leaves at 2–6 MST, cob diameter with husk, cob diameter without husk, male flowering age, ear weight per planting, ear weight per bed, leaf stomatal width, sugar content (°Brix), and yield in metric tons per hectare. The best treatment was at a dose of 11.34 kg/plot. The pruning treatment affected the variables of cob diameter with husk, cob diameter without husk, cob weight per plant, cob weight per bed, sugar content (°Brix), and yield in metric tons per hectare. The best pruning treatment was removing 4 leaves. There was a combined interaction between the goat manure and leaf pruning treatments on the variables of leaf area, leaf stomata, cob weight per bed, and yield in metric tons per hectare. The best interaction was observed at a rate of 11.34 kg/plot and pruning of 4 leaves. The best interaction was observed at a rate of 11.34 kg/plot and the removal of 4 leaflets.

Keywords: Organic fertilizer, plant growth, productivity, cob characteristics, sugar content.