Productivity, relative yield and plant growth of forage corn intercropped with soybean under different crop combination ratio

ABSTRACT

An experiment was carried out to evaluate influence of different crop combination ratios of corn and soybean in terms of forage yield in corn-soybean intercropping. The experiment compared both corn and soybean as monocultures and in different intercropping ratios from 25:75, 50:50 and 75:25 of corn to soybean. The crop combination ratio had significant effects on physiological traits and dry matter yield of forage. The ratio of 75:25 and 50:50 recorded DM yields similar to those of monocropped corn (14.77 t/ha). Relative yield total (RYT) values of intercropping were higher than that of monocrop corn and soybean. Mixtures with 50:50 combination ratio had higher mean total relative yield values (1.15) in comparison with the other ratios. Land equivalent ratio (LER) increased with corn-soybean intercropping and the highest total LER value was recorded with 50:50 ratio (1.13). The crop ratio of 50:50 gave the best combination based on DM yield, relative yield, LER of the combined forage.

Keyword: Corn-legume forage; Forage yield; Intercropping; LER; Relative yield