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EVALUATION OF FOUR CROPPING SYSTEMS IN THE CONTROL OF MAIZE STEM BORERS AND THE EFFECTS ON MAIZE GROWTH AND GRAIN YIELD

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ABSTRACT

The severity of stem borer damage on the growth and grain yield of maize (*Zea mays L.)* under four cropping systems: continuous maize cropping, continuous strip intercropping, rotational strip intercropping and crop rotation, was investigated at the University of Agriculture, Abeokuta, Teaching and Research Farm in the 1998 planting seasons. Maize cultivar TZSRW was planted on the flat at 1m x 20 cm while ife Brown was planted at 50 x 18 cm in both cropping seasons. The experiments were planted in Randomized Complete Block Design with four replications in the early and late cropping seasons. The rotation of early season sole cowpea crop with the late season sole maize crop gave the highest maize plant survival, plant height and grain yield. This was followed by the rotational strip intercropping. Continuous intercropping of maize on the same strip in the early and late cropping seasons gave very poor growth and grain yield of maize. The late season sole maize crop planted after an early sole maize crop gave the worst performance. Stem borer population in the early sole maize plant residues almost doubled that of intercropped maize plots.

Keywords: Maize, stem borers, strip intercropping, continuous cropping, sole cropping.