

**Growth and Yield of Cassava (*Manihot
Esculenta* Crantz), Cowpea (*Vigna
Unguiculata* s.sp *Unguiculata* (L)
Walp) and Maize (*Zeamays* L.) in Sole
Cropping and Intercropping.**

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Abstract:

Growth and yield of cowpea (Vigna unguiculata s.sp. unguiculata (L) Walp) maize (Zea mays L.) and cassava (Manihot. esculenta Crantz) were studied at two plant populations in sole crop and in a three crop association during the late season of 1983 and the early season of 1984 at the University of Ife Teaching and Research Farm. The eight mixture treatments were planted in a randomized complete block design with three replications. There were two sole crop plots for the two populations of each crop as checks.

In the late season, maize and cassava populations significantly increased the plant height, but significantly decreased canopy diameter for all the associated crops and significantly decreased the dry matter yield for maize. Cowpea population significantly increased cowpea plant height and significantly decreased cow-pea canopy diameter. In the early season, cassava and maize significantly increased the plant height and significantly decreased the canopy diameter of all associated crops. Cowpea population significantly increased cowpea plant height and significantly decreased cowpea canopy diameter and dry matter yields.

Cowpea population also significantly increased cowpea and maize grain yields. Maize population, however, significantly reduced the grain yields of cowpea and maize and the storage root yield of cassava. Cassava population significantly decreased cowpea and maize grain yields and significantly increased the storage root yield of cassava.

The highest land equivalent ratio (LER) of 1.64, land equivalent coefficient (LEC) of 0.133 and monetary equivalent ratio (MER) of 1.22 were obtained from the treatment that contained cowpea at 36,600 plants, maize at 16,600 plants and cassava at 3,300 plants per hectare. LER of 1.64 and LEC of 0.133 showed an agronomic advantage of 64% and 9.7%, respectively, in mixture while the MER of 1.22 showed an economic advantage of 22% of mixture over sole crop cassava.

Keywords: Sole cropping/ inter cropping/ Vigna unguiculata s.sp. unguiculata (L) Walp/ Zea mays L./ Manihot. esculenta Crantz

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