

In field trials in 1972-4, maize cv. Katumani Composite B in the short rainy season and Hybrid 511 in the long rainy season were grown in pure stands or in mixture with potatoes or with beans (*Phaseolus vulgaris*) cv. Canadian Wonder. Yields in pure stands of maize and beans increased with plant density from 4.1 t grain and 1.05 t seed, respectively at low density to 10.4 t and 2.05 t/ha, respectively at high density. Potato yields were low in all trials. Maize/bean mixtures gave lower yields than pure stands in unfavourable seasons, but were more productive with high rainfall. It was concluded that there was no evidence for increased production from crops grown in mixture in this area of Kenya.