

In a trial during 4 cropping seasons in 1972-4 at Kabete, yields of maize/bean (*Phaseolus vulgaris*) and maize/potato mixtures grown in alternate rows were compared with pure stands of the component species. In seasons with low rainfall yields of the mixtures were much lower than those of pure stands, but in the exceptionally wet long-rains season of 1974 the maize/bean mixture outyielded the pure stands. Poor yields of mixtures in seasons with low rainfall were attributed to large decreases in maize grain yield due to competition from beans and potatoes.