

## Abstract

To establish maize yield responses to N and P fertilizer and to manure, cowpeas were intercropped with maize in the drier zones of Kenya. The experiments were conducted over five seasons at six trial sites, in the coastal lowlands and in semi-arid parts of Kenya. Maize yields were significantly increased by the use of N and P and manure. Maize yields increased ( $P = 0.05$ ) with the cowpea intercrop along the coastal lowlands, with increases ranging between 11 and 26%, while maize yields in the hinterlands were greatly reduced (18-36%), probably due to competition for environmental resources. Cowpea yields were generally low and unaffected by fertilizers or intercropping. The maize sole crop used N better than maize in the cowpea- maize intercrop, which in turn used P better than maize alone.