

Greenhouse and field experiments were carried out to determine the number of rhizobia in soils of SE-Kenya, nodulation and nitrogen fixation by green grams in two cropping systems was also determined. The Most Probable Number (MPN) of rhizobia cells capable of nodulating green grams were between 519 and 3,780 per gram of soil in SE-Kenya. These results were confirmed by lack of response to inoculation and effective nodulation of the control plants under field conditions. Green grams intercropped with maize had significantly higher dry weights than the ones grown as pure stand, 21 days after emergence (DAE). The increase was transitory because it was not observed at podding (42 DAE) and at physiological maturity (100 DAE). Green gram yield was not affected by maize intercrop. However, maize yields were significantly reduced by intercropping with green grams. Soil analysis from treatment plots before and after the cropping season indicated that green grams increased soil nitrogen slightly or maintained it at preplanting levels. This was unlike pure maize plots where there was a decline in soil nitrogen (N).