Abstract
A field experiment was conducted during 2002 and 2003 cropping seasons to assess the effect of four N:P:K (20:10:10) fertilizer rates (0, 100, 200, 300 kg/ha) and two cropping systems (sole and intercrops) on the yield and productivity of the component. The treatments were laid out in a split plot arrangement in a randomised complete block design with three replications. The cropping systems were assigned to the main plots and the fertilizer rates were in the subplots. Intercropping reduced the yields of soybean and maize compared with their sole crops. Soybean yields were generally low due to the shading effect of the maize component. Applying fertilizer significantly increased the yield of the component crops in both seasons than when no fertilizer was applied. The results further showed that soybean benefited more from the highest rate (300 kg N: P: K/ha). There was no interaction between cropping system and fertilizer rate in both seasons. The productivity of soybean/maize mixture showed yield advantage of 68 (2002) and 79 % (2003). The highest monetary returns (N72, 717.10 and N87, 165.40/ha) were achieved at the highest fertilizer rate used in the study in soybean/maize intercrop in both cropping seasons. This implies that the optimum productivity and monetary return of the mixture should be investigated beyond 300 kg/ha NPK fertilizer application.

Keywords
Soybean, maize, intercropping, fertilizer rate, productivity.