7.1.2.1 Chitaya, Soka Z. B. (1996). The effect of nitrogen and phosphorus on growth, yield and quality of paprika (*Capsicum annum* L.). (Supervisors: Dr. B. H. Chishala and Dr. D. M. N. Mbewe).

A field study was conducted in the 1994/5 growing season at the Enviroflor farm located 28°56"E and 15°32"S to establish the effect of variety, nitrogen and phosphorus on growth, yield and quality of paprika (*Capsicum annum* L.). A split-split plot design was used where varieties (King, Queen and Brinchem) were the main plots, nitrogen levels (0, 56, 112 and 224kg/ha) were sub-plots and phosphorus levels (0, 28, 56 and 112kg/ha) were the sub-sub plots. Each treatment was replicated four times. Nitrogen levels were split applied while P levels were all applied at once. The soil was Chankunkula sandy loam. Increasing rates of nitrogen significantly affected all the growth parameters measured (plant height, growth rate, number of fruits per plant, fruit length, number of branch nodes per plant, fruit abortion and number of days to second flowering) and yield did not affect colour content. Increasing rates of phosphorus significantly increased plant height, fruit number per plant, growth rate and branch number. Variety influenced plant height, number of fruits per plant, fruit length, fresh red fruit yield, dry yield, growth rate and fruit abortion. The interaction between variety and rate of nitrogen influenced plant height, number of fruits per plant, fruit length, and growth rate. The interactive effect of variety and rates of phosphorus affected plant height, number of fruits per plant, growth rate, days to flowering and colour content. The interaction between rates of nitrogen and phosphorus application significantly influenced plant height, number of fruits per plant, growth rate, days to second flowering and fruit abortion. The interaction effects of variety and rates of nitrogen and phosphorus application produced marked effects on plant height and growth rates only. Dry yield correlated positively with plant height, growth rate, number of fruits per plant, branch nodes per plant, fruit length and fresh red fruit yield. However, a negative correlation was observed between dry yield and fruit abortion per plant.