



227/B

### Effect of weed density in chilli legume intercropping

I Brintha and T H Seran\*

Department of Crop Science, Faculty of Agriculture, Eastern University.

Weed is an undesirable and unwanted plant growing out of their proper place and mostly considered detrimental to production. It is well known that the weeds compete with crops for light, water, nutrients and space. Intercropping is an ecofriendly approach for reducing weed problem through nonchemical methods. However, its effectiveness varies greatly from crop to crop. Chilli is one of the most important cash crops grown in Sri Lanka and it is an essential ingredient in Sri Lankan diet. The objective of this study was to evaluate the effect of weed density in chilli legume intercropping. Therefore an experiment was carried out in a Randomized Complete Block Design at the Crop farm of the Eastern University of Sri Lanka in 2009/2010. Treatments were chilli as monocropping (T1), chilli + greengram intercropping (T2) and chilli + cowpea intercropping (T3). Agronomic parameters were followed by the recommendation of Department of Agriculture of Sri Lanka. The results revealed that the dominant weeds in the experimental plots were mostly broad leaves and major weed flora observed were *Borreria laevis*, *Euphorbia hirta*, *Phyllanthus amarus* and *Mollugo cerviana*. Among narrow leaved weeds, major weeds were *Cyperus rotundus*, *Cynodon dactylon* and *Cyperus brevifolius*. Other weeds were recorded in lower densities were *Cleome viscosa* and *Malvastrum coromandelianum*. There were significant differences ( $P < 0.01$ ) between intercropping and monocropping treatments in weed density and weed dry weight. The densities of narrow and broad leaved weeds were high in monocropping compared to intercropping and also dry matter accumulation of weeds were significantly ( $P < 0.01$ ) reduced in intercropping compared to monocropping. Intercropping tended to show greater weed suppression compared to monocropping indicating synergism between crops in intercropping with regard to weed suppression. The present results indicated that intercropping chilli with legumes would be useful for weed suppression in chilli cultivation in sandy regosol.