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**Allelopathic effect of leaf, stem and root extracts of *Cynodon Dactylon* and *Echinochloa crus-galli* on the seed germination and root growth of *Lycopersicon esculentum* Mill (Tomato) and *Capsicum annum* L. (Chilli)**

*Cynodon dactylon* and *Echinochloa crus-galli* are tow major weed species found in tomato (*Lycopersicon esculentum* Mill.) and chilli (*Capsicum annuum* L.) fields in Sri Lanka. Growth reductions have been observed in crops grown association with these weeds. It has been reported that *C. dactylon* and *E. crus-galli* may reduce growth of several crop species by allelopathic mechanism.

The objective of this study was to compare the allelopathic potential of leaf, stem and root extracts of these weeds and examine their influence on seed germination and root growth of tomato and chilli.

Fresh tissues of (10 g ) leaf, stem and roots of C. dactylon and E. crus- galli were macerated separately in 100 mL distilled water. The extracts were filtered and filterates were used. Ten seeds each of tomato and chilli were placed separately in Petri dishes lined with a single disc of filter paper, moistened separately with 5 ml of aqueous extracts of leaf, stem and root of two weeds. The Petri dishes were incubated at 26 $^{o}$C in darkness. Six replicates were maintained. The seed germination and root lengths of seedlings were recorded daily.

All extracts inhibited the germination being 20 – 65% in tomato and 7.7 – 37.5% in chilli. Stem extracts of *C. dactylon* and *E. crus-galli* caused maximum inhibition ingermination of chilli. Seedling death due to root tip burning was observed in tomato with both stem and root extracts of C. dactylon

The extracts of E. crus –galli were least inhibitory to germination and root growth in tomato and chilli seedlings. Inhibition in seed germination and seedling root growth may be attributed to the presence of some allelo-chemicals present in all the plant parts of weed species.