TURK J. OF FIELD CROPS 4:52-55 (1999)

INHERITANCE OF *IN-VITRO* CALLUS PRODUCTION IN CHICKPEA

Kh.Alizadeh *M. Valizadeh* *M.Khosrovshahly* *F.R.Khoii* *M. Ghadimzadeh*
Tabriz University, Faculty of Agriculture, Department of Plant Breeding and Agronomy,
Tabriz-Iran

ABSTRACT

Seven genotypes were randomly taken among accessions of Cabuli chickpea (*Cicer arietinum* L.) in Iran which were previously characterized as being able to initiate callus. The cultivars were crossed to generate a seven-parent diallel set, with reciprocals; and the progenies were evaluated for callus production. Significant differences ($p<0.01$) were found among crosses and for general combining ability (GCA) effects. However Specific combining ability (SCA) and reciprocal effect were found to be nonsignificant ($p>0.05$). Estimate of heritability (h^2) for callus production on plot mean basis was 60 %. Since, heritability was relatively high, and no reciprocal effects were detected, breeding strategies using any selection methods including recurrent selection should result in the development of high *in-vitro* callus producing populations.