

Diallel Analysis of Yield Traits in Bottle Gourd

M. L. Liu¹

Abstract

Four inbred lines and their twelve single cross hybrids were evaluated for days to 1st female flower, ovary length, ovary diameter, fruit length, fruit diameter, fruit's pith broad, fruit weight and total fruits in field studies conducted in spring of 1999.

The combined analysis of variance for these traits indicated that the mean squares for genotype were significant. Analysis using Griffing's Method 1 indicated that general combining ability(GCA),specific combining ability(SCA)and reciprocal effects were significant for fruit length and fruit weight. Both additive and nonadditive component were responsible for the expression of these traits. Reciprocal effects of these traits were found, too. The GCA effect and reciprocal effect were significant for days 1st female flower, ovary length, fruit diameter. Since reciprocal effects were found, caution should be made for choosing inbreds as male or female parents,

Key words : bottle gourd 、 diallel analysis.

¹An assistant of chinan Branch Station, Kaohsiung DAIS