COMPARATIVE STUDIES ON SOME OKRA HYBRIDS

By

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Approval Sheet

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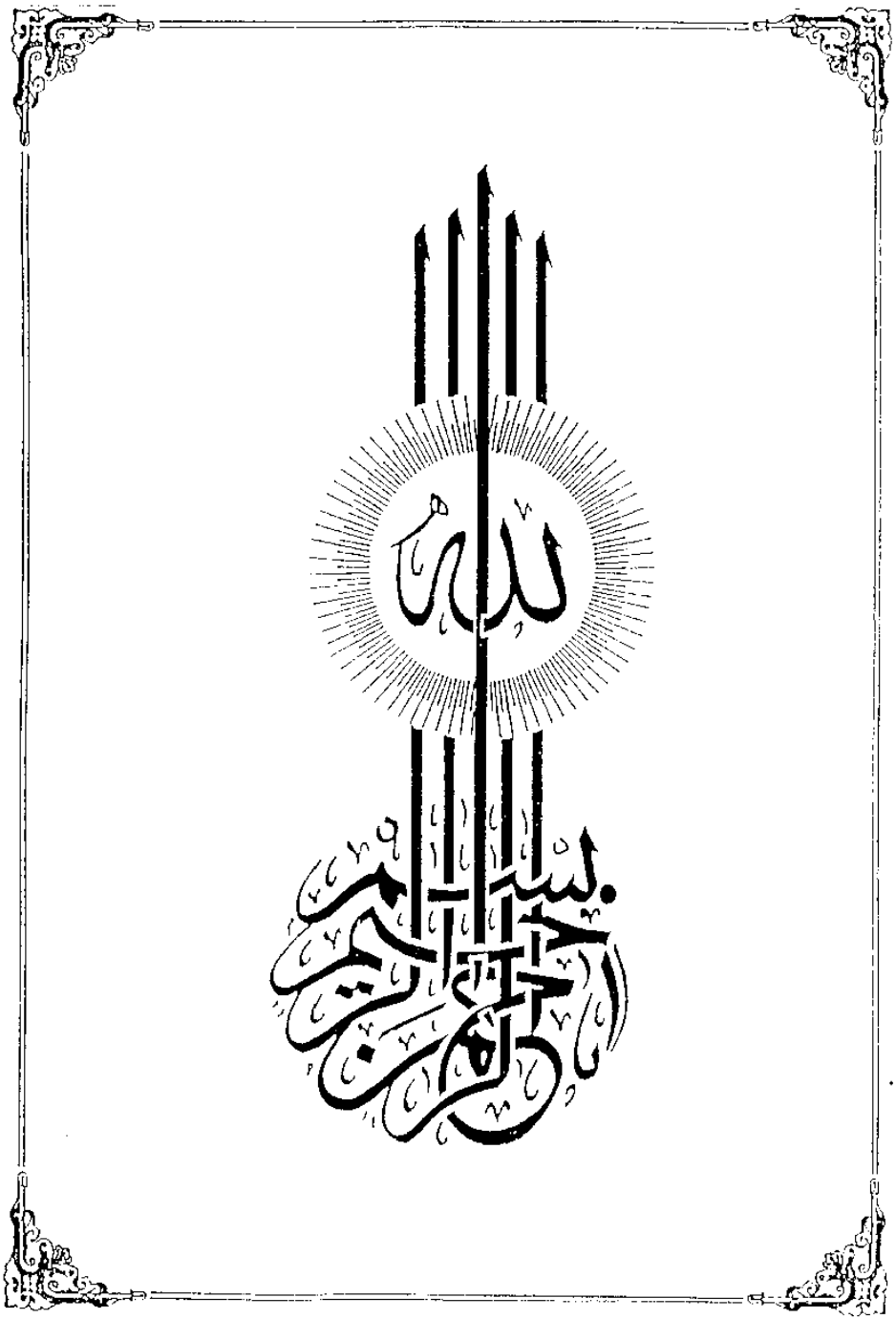

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Abstract

These studies were performed at the Barrage Horticulture Experimental Station during the period from 1989-1992. Five okra cultivars i.e Esamily, Balady, Clemson Spineless, Gold Coast and Dwarf Green Long Pod were used. These cultivars were self pollinated for three successive generations to obtain inbred lines. Diallel crosses were made between these parental lines to obtain 10 single cross hybrids. The hybrids and their parents were evaluated at the immature pod stage (marketable stage). Studies also included determination nature of dominance and its direction as well as the heterosis value existed in some characters i.e. plant height, flower earliness in addition to number of pods/plant, total yield/plant, pod weight, pod length and pod diameter which were evaluated at the ripening stage. Results revealed that, some hybrids exhibited good fruiit quality, earliness of flowering and high yielding ability. The most promising hybirds were (EsmailyxClimson Spineless) and Esmaily x Dwarf Green Long Pod .

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KEY WORDS

* PLant breeding
*Sun dried
*Abelmoschus esculentus
* Heterosis
* Hybrid Vigour
* okra
* Esmaily
* Balady
* clemson Spineleos
* Gold Coast
* Dwarf Green long Pod
* Immature
* mature
* Viscosity
* Fibers
* Carbo hydrates
* Flower earliness
* Overdominance
* Complete Dominence
* Partial Dominance
* Absence of dominance

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I. INTRODUCTION

Okra (*Abelomoschus esculentus Moench*) is one of the important vegetable crops in A.R Egypt. In 1992, acreage planted with okra was 11618 Feddans and its productivity was approximately 64612 tons*.

Hybridization has long been and still is used in improving yield and quality of many vegetable crops. It is also true that planned hybridization between carefully selected parents has come to be a dominate method of breeding crops.

Hybrids are those in which F_1 populations are used to produce the commercial crops. These hybrids are usually highly heterozygous and show hybrid vigor. Hybrid vigor may be defined as a manifestation of heterozygosity, expressed as increase vigor size, fruitfulness and resistance to diseases, insects or climatic extremes. In this connection, okra seems to have little attention, and consequently, genetic information on characteristics of okra is needed for wide intervarietal crosses in order to plan accurate and efficient breeding programs.

Great variability regarding earliness, yielding ability and fruit characteristics was found among okra cultivars and hybrids.

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Therefore, the object of this work was to obtain some okra hybrids through hybridization and to evaluate these hybrids in comparison with their parents in order to choose the most promising ones to be replaced in cultivation instead of the open pollinated varieties.