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Title: STUDIES ON HETEROSIS AND COMBINING ABILITY IN OKRA (*Abelmoschus esculentus* L. Moench)

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**Abstract:** The present investigation entitled “Studies on heterosis and combining ability in okra *Abelmoschus esculentus* L. Moench” was taken up to evaluate some of the available germplasm complexes of okra for their future utilization in crop improvement programme. An experiment was conducted in the field of Horticulture Department, using line x tester method. Ten diverse germplasm complexes used as female were crossed with four testers of different genetic base as male. Forty cross combination along with fourteen parents were evaluated for variability, heterosis and combining ability, percentage of contribution by female/male parent for each character had been computed. The parents and crosses were found to differ significantly for almost all the characters. The mean squares due to hybrids were significant for all the characters. The mean value of twenty two characters were found more in crosses than parents. The phenotypic and genotypic variability was found more in crosses than in parents in ten characters. Where as a reverse trend was observed in twelve characters. The phenotypic coefficient of variation was high for all the twenty two characters. Large number of crosses were found to give significant heterosis over mid parent, better parent and check in majority of the characters HRB-9-2 X VRO-5 (88.84%), Parbhani Kranti X 156 Red (65.84%), sel-10 X 156 Red (54.92%) were the three crosses which showed maximum positive heterosis over check parent for yield per hectare. These crosses have significant positive standard heterosis for plant height, leaf area, days to first flowering, Days to fifty percent flowering, days to first picking, fruit breadth. KS-410 was the best combiner for yield per hectare (26.63) beside. Number of fruits per plant, days to first flowering, days to first fruit set, Days to fifty percent flowering, Number of leaves per plant, Number of flowering nodes per plant, height of inter node and leaf area. 155 Red X IIVR-10, HRB-9-2 X VRO-5, Parbhani Kranti X 156 Red were the three best specific cross combinations for yield per hectare. In correlation study, the yield was found to be positively and significantly correlated with ultimate plant height, girth of the plant, fruit breadth, fruit weight, yield per plant and yield per plot.

**Description:** STUDIES ON HETEROSIS AND COMBINING ABILITY IN OKRA (*Abelmoschus esculentus* L. Moench)

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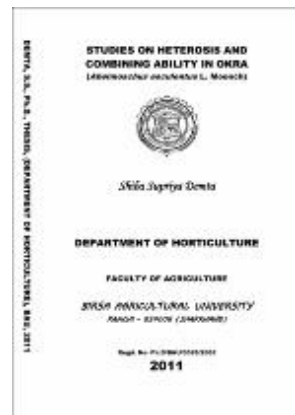
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