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Correlation Coefficient Between *per se* Performance, Array Mean and General Combining Ability Effects in Okra (*Abelmoschus esculentus* (L). Moench)

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The study of genetic association between various characters with yield is helpful during selection as it is possible to bring about a desired change in yield potential of a variety by giving importance to such characters during selection. To study the correlation coefficient between *per se* performance, array mean and *gca* effects in okra (*Abelmoschus esculentus* (L.) Moench) twenty-eight genotypes comprising seven parents, viz. New Selection, Rashmi Lucknow, Kheda-8, Pusa Sawani, A.E. 91, Pegrin and Red Wonder and their twenty-one single crosses, produced in diallel fashion ignoring reciprocals, were grown each in a single row plot of 2.25 m length spaced at 22.5 cm

TABLE 1

Correlation coefficient between *per se* performance, array mean and g.c.a. effects of the parents for different characters in a 7 x 7 diallel cross in okra.

Characters	*r between per se performance and array mean*	*r between per se performance and g.c.a. effect*	*r between array mean and g.c.a. effect*
Days to 50 per cent flowering	0.9470**	0.9715**	0.9961**
Days to first picking	0.9426**	0.9622**	0.9958**
First fruiting node	0.9861**	0.9925**	0.9990**
Pod length (cm)	0.8925**	0.8480*	0.8885**
Pod girth (cm)	0.5689	0.7671*	0.9743**
Number of pods per plant	0.8041*	0.8930**	0.9645**
Number of nodes on main stem	0.5622	0.7100	0.7548*
Internodal length (cm)	0.9665**	0.9776**	0.9991**
Plant height (cm)	0.8776**	0.9623**	0.9937**
Yield per plant (g)	0.0237	0.2918	0.9493**

*Significant at 0.05 probability level.
**Significant at 0.01 probability level.

apart in a randomized block design with four replications during *kharif* 1982. Five competitive plants were used to record following observations: days to 50 per cent flowering, days to first picking, first fruiting node, pod length, pod girth, number of pods per plant, number of nodes on main stem, internodal length, plant height and yield per plant.

The results presented in Table 1 indicated that there was a high correlation between *per se* performance and array mean for all the characters except pod girth, number of nodes on main stem and yield per plant. Similarly high correlation was found between *per se* performance and *gca* effects for all the characters except number of nodes on main stem and yield per plant. The high correlation between *per se* performance, array mean *gca* effects indicate the potentiality of a strain to be used as an elite parent for breeding purpose. The correlation between array mean *gca* effects was high for all the characters studied. This points out the involvement of additive gene action. Thus improvement in the population could be brought through the selection of desirable recombinants from segregating population. Selection can be practised on the basis of F_1 performance and combining ability effects. These findings are in agreement with the results of Elangovan *et al.* (1981). The high correlation between array means and *gca* effects of the parents for all the characters suggested that array mean could be used to judge the *gca* of parents. Similarly the high correlation between *per se* performance and *gca* effects of the parents for most of the characters suggested that *per se* performance could be used to judge the *gca* of the parents.

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