

**Research Notes**

## **Correlation studies in cowpea (*Vigna unguiculata* (L.) Walp)**

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Cowpea (*Vigna unguiculata* (L.) Walp.) is widely distributed throughout the Tropics and Subtropics. It is grown for grain, vegetable and fodder. Genotypic correlation would provide a measure of genetic association between characters and are generally used in selecting for one character as a means for improving another.

Thirty five genotypes involving 11 parents *viz.*, CO2, PI52, VBN 2, VCP 16, VCP 24, VCP,29, VCP34, VCP37, VCP 39, VCP44 and 24 hybrids produced through line x tester (8x3 )mating design were used for this study. All the treatments were laid out in RBD with two replications. Each genotype was represented by a row of 3m length with 45x 15 cm spacing. All the agronomic practices and plant protection measures were adopted as per package of practices. Observations were recorded from five randomly selected plants from each genotype for 12 characters *viz.*, plant height, number of branches per plant, number of clusters per plant, number of pods per plant, pod length, number of seeds per pod, 100 seed weight, green pod weight, protein content in pod, crude fibre content in pod, grain yield per plant and vegetable yield per plant.

### *Grain yield*

The correlation coefficients at genotypic level (Table 1) indicated that grain yield per plant was positively associated with number of branches per plant, pod length, number of seeds per pod, 100 seed weight, vegetable yield per plant and protein content in pod. This result was in close agreement with those obtained by earlier workers, Borah *et al.* (2002) and Venkatesan *et al.* (2003) for number of branches per plant, Ushakumari *et al.* (2001) and Borah *et al.* (2002) for pod length, Kalaiyarasi and Palanisamy (2002) for number of seeds per pod, Tyagi *et al.* (2000) and Borah *et al.* (2002) for 100 seed weight.

### *Vegetable yield*

In this study, vegetable yield per plant expressed significant positive association with number of branches per plant, number of pods per plant, pod length, number of seeds per pod, 100 seed pod length weight, green pod weight, and protein content in pod and grain yield per plant. Similar results were observed by Cahill Shah and Lal (1990) and Subbiah *et al.* (2003) for number of clusters per plant, number of pods and pod length, Subbiah *et al.* (2003) for number of seeds per pod, 100 seed weight and green pod weight, Hazra *et al.* (2003) and Nita Kar *et al.* (2000) for protein content in pod.

**Table 1. Genotypic correlation between grain yield and different traits.**

Characters	Plant height	No. of branches per plant	No. of clusters per plant	No. of pods per plant	Pod length	No. of seeds per pod	100 seed weight	Green pod weight	Protein content in pods	Crude fibre content in pods	Vegetable yield per plant	Grain yield per plant
Plant height	1.000	0.322*	0.246	0.193	0.334*	0.422*	0.244	0.306	-0.015	-0.232	0.287	-0.034
No. of branches per plant		1.000	0.303	0.265	0.702*	0.496*	0.400*	0.629*	0.707*	-0.533*	0.536*	0.564*
No. of clusters per plant			1.000	0.844*	0.403*	0.193	0.255	0.416*	0.432*	-0.510*	0.511*	0.166
No. of pods per plant				1.000	0.254	0.059	0.196	0.227	0.350*	-0.451*	0.443*	0.073
Pod length					1.000	0.730*	0.702*	0.947*	0.666*	-0.553*	0.853*	0.587*
No. of seeds per pod						1.000	0.683*	0.655*	0.365*	-0.175	0.489*	0.501*
100 seed weight							1.000	0.571*	0.231	-0.135	0.507*	0.665*
Green pod weight								1.000	0.690*	-0.591*	0.856*	0.546*
Protein content in pods									1.000	-0.693*	0.658*	0.391*
Crude fibre content in pods										1.000	-0.570*	-0.151
Vegetable yield											1.000	0.527*

\* Significant at 5 per cent level.

In the present study 100 seed weight, pod length, number of branches per plant, green pod weight and number of seeds per pod were the major grain yield contributing characters whereas green pod weight, pod length and number of branches per plant were the major vegetable yield contributing characters. Hence during selection weightage should be given to the above characters to improve the grain yield and vegetable yield.

### References

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### Research Notes

## Genetic parameters of selected yield attributes in Okra (*Abelmoschus esculentus* (L.) Moench)

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Okra (*Abelmoschus esculentus* (L.) Moench) is a highly adaptable crop and grown for tender green fruits. Presently the productivity

of okra shows a declining trend. Hence developing high yielding varieties is of utmost important. Selection of desirable genotypes must