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Short Communication

Selection criteria for genetic improvement in mungbean (*Vigna radiata* (L) Wilczek)

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Selection of an elite genotype on the basis of yield itself is not a relevant procedure in a crop improvement programme. The success rate of selection in any crop undoubtly depend upon the authentic information on magnitude and direction of inter-relationship of various component characters. It is a well known fact that a significant positive relation between two desired traits are always favourable and on the other hand a negative association between two desirable traits are always a nuiscence to a plant breeder. Therefore, in view of the aforesaid facts the present study was undertaken to establish an authentic selection criteria for genetic improvement in mungbean through an analysis of inter-relationship of various component traits of seed yield.

Nineteen genotypes of mungbean were grown in a randomized block design with three replications during the *kharif* season of 1999 with a distance of 30 cm and10 cm. between the rows and plants respectively at the CSK HPKV, Research station, Berthin, Distt. Bilaspur, Himachal Pradesh,(31°12'30" to 31°35'30" N latitude and 76°23'45" to 76°55'40" E longitude, 625 meters above mean sea level). The plot size consisted of three rows of 2.5 meter length each. The data were recorded on a sample of five random plants from each plot for ten characters including seed yield per plant (Table 1). Genotypic and phenotypic correlations between the characters studied revealed that

Table 1: Genotypic (G) and phenotypic (P) correlation coefficients among seed yield and component traits in mungbean

Characters		Days to 50% flowering	Days to 80% maturity	Plant height of (cm.)	Number clusters/ plant	Productive branches/ plant	Productive pods/ plant	Number of seeds/ pod	100 seed weight(g)	Biological yield/ plant (g)	Seed Yield/ plant
Days to 50 % flowering	G	1.000	0.084	-0.431	0.829	0.902	0.754	-0.124	0.115	0.899	0.882
	P		0.248	-0.051	0.266	0.278	0.276	0.031	-0.39	0.292	0.202
Days to 80 % maturity	G		1.000	0.918	0.384	0.099	0.726	0.889	-0.587	0.917	0.403
	P			0.416	0.124	0.068	1.07	0.505 *	-0.284	0.162	0.149
Plant height (cm)	G			1.000	0.608	-0.752	0.023	0.490	-0.621	-0.243	-0.495
	P				-0.157	-0.091	-0.17	0.500 *	-0.365	0.247	0.268
Number of clusters/ Plant	G				1.000	-0.461	0.713	0.026	0.060	0.586	0.902
	P					0.484 *	0.710 **	0.217	0.160	0.468 *	0.717 **
Productive branches/ Plant	G					1.000	0.487	0.071	0.215	0.751	0.907
	P						0.241	0.098	-0.052	0.591 **	0.358
Productive pods /Plant	G						1.000	0.193	-0.416	0.957	0.906
	P							-0.27	-0.048	0.398	0.736 **
Number of seeds/ pod	G							1.000	-0.125	0.472	-0.001
	P								-0.062	0.212	0.131
100 Seed weight (g)	G								1.000	-0.292	-0.017
	P									-0.085	0.176
Biological yield/ Plant (g)	G									1.000	0.923
	P										0.346
Seed yield / plant (g)	G										1.000
	P										

* Signigicant at 5 % level of probability
** Signigicant at 1 % level of probability

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