

### Stability of days to maturity in soybean

It is only in recent years that the methods have been developed which could be used for getting reliable estimates of genotype  $\times$  environment interactions. The present investigation was undertaken to select stable and responsive genotypes in Soybean (*Glycine max* (L.) Merrill) by studying in three artificially created environments. Mean data of 5 competitive and randomly selected plants from each of the four replications for days to maturity were analysed following Eberhart and Russell (1966).

The linear and nonlinear mean squares were non significant indicating that neither linear nor non linear environmental contribution of environments to the genotypes was meaningful. Further, there was absence of deviation from regression. Hence, most of the genotypes will be stable. The genotype Bragg matured earliest followed by HM90, HM44, JS72-395, HM78, DS73-16, HM25, HM12 and HM49. On the contrary, PK73-64 took maximum time to mature followed by HM1, PK74-262, Ankur, HM33, PK73-94, HM112, SH2, SH3, SA5, HM42 and PK73 86. The remaining genotypes matured in average time. The genotype SH3, HM93, PK321, PK73-96, DS73-16 and Bragg were highly responsive to better environment i. e.,  $b > 1$ . The genotypes HM8, HM10, HM33, HM44, HM49, SH2, SH4, HM25, PK73-92, PK73-64, PK73-94, HM90, PK71-21,

DS74-20-2, HM78, and Ankur were responsive to average environment i. e.  $b = 1$  with significance limits which is 0.81 to 1.19 in the present investigation. The remaining genotypes were responsive to poor environment (Table 1)

In the present investigation all the genotypes were found stable except Bragg. Sixteen genotypes were with average ( $b = 1$ ) six with above average ( $b > 1$ ) and ten were with below average response ( $b < 1$ ) to change in environment. Bragg was not stable but had above average response ( $b = 2.04$ ) and matured earliest in comparison to other genotypes suggesting its suitability to better environment. Genotype PK73-64 with average response ( $b = 0.99$ ) was stable and matured in maximum time in contrast to other genotypes showing its suitability to all the environments. Genotypes HM112 and PK71-6 were the two stable genotypes with below average response ( $b = 0.79$  and  $0.63$ , respectively) and matured in average time depicting their suitability to poor environment,

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#### REFERENCES

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TABLE 1. Estimates of stability parameters.

Genotypes	Mean	B <sub>1</sub>	S <sup>2</sup> di
HM 1	107.67	0.81*	3.80
HM 8	100.92	0.89*	-7.53
HM 10	101.33	1.15*	-1.42
HM 11	100.92	0.73	21.81
HM 12	95.09	0.81*	-6.33
HM 26	99.00	0.89*	2.14
HM 33	106.33	0.88*	-8.05
HM 42	105.42	0.68	24.85
HM 44	96.17	0.98*	-6.54
HM 49	97.17	1.18*	-5.65
HM 78	96.33	1.01*	-4.11
HM 90	95.75	0.94*	-5.72
HM 93	101.83	1.28*	-8.04
HM 112	104.00	0.83*	-5.74
SH 1	102.33	0.79*	-7.29
SH 2	114.17	0.98*	3.57
SH 3	104.00	1.25*	5.51
SH 4	102.92	1.12*	-4.93
SH 5	105.50	0.53*	-4.04
PK 321	102.00	1.42*	-7.74
PK 71-6	103.25	0.63*	-2.07
PK 71-21	103.50	1.11*	-7.91
PK 73-64	107.83	0.99*	-6.48
PK 73-86	104.33	1.20*	-5.38
PK 73-92	102.08	1.04*	-6.67
PK 73-94	106.33	1.03*	-6.51
PK 74-262	106.92	0.38*	-7.67
DS 73-16	97.92	1.22*	-2.61
DS 74-20-2	100.33	1.09*	-6.85
JS 72-395	96.42	1.08*	-5.02
Ankur	106.50	1.06*	12.84
Bragg	92.08	2.04*	192.95*
Mean	101.75		

\*Significant at 5 percent