STUDY ON INTER RELATION AND PATH COEFFICIENT FOR YIELD AND ITS ATTRIBUTING CHARACTERS IN SOYABEAN [*GLYCINE MAX* (L.)]

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Abstract: Twenty promising breeding lines of soybean were evaluated for correlation and path coefficient for eighteen economically important attributes. The mean squares were significantly for all the characters. Based on mean performance, six genotypes viz. ISS-522, ISS-524, ISS-631, ISS-715, ISS-734 and ISS-889 were significantly superior in yield and other major yield contributing characters. Seed yield showed significant positive correlations with total dry matter weight and harvest index. And, these characters were also positively associated with each other. Protein and oil contents showed significant and negative association with each other. While, 100-seed weight had positive association with oil content but negative with protein content, path coefficient analysis indicating major role of pods/plant, total dry matter, primary branches/plant, seed yield efficiency and 100-seed weight both directly and indirectly influenced seed yield. Therefore, main emphasis should be given on these traits during phenotypic selection for the developing high yielding genotypes of soybean.

Key words: Correlation, Path analysis, Direct & indirect effect.

REFERENCES

Algan, N. (1992). Chemical evaluation of some soybean varieties. *Egouniversitesi-Zirrat-Fakultesi-Dergisi.* **29**(2-3): 1-8.

Al-Jibouri, H.A.; Millar, P.A. and Robinson, H.P. (1958). Genotypic and environmental variances in up land cotton cross interspecific oigin. *Agron. J.,* **50**: 633-636.

Harer, P.N. and Deshmukh, R.B. (1992). Genetic variability, correlation and path coefficient analysis in soybean [G. max (L.) Merrill]. *Indian J. Oil Seeds Res.,* **9**(1): 65-71.

Jadhav, A.S.; Jadhav, P.J. and Bachchhav, S.M. (1995). Correlation and path coefficient analysis in soybean. *J. Maharastra Agric. Univ.,* **21**(1): 150-151.

Sharma, S.K.; Rana, N.D. and Mehta, H. (1986). Genetic variability inter-relationships and path coefficient analysis in a collection of small seeded soybean. *Egyptian J. Genet. Cytol.,* **16**(2): 273-283.

Shrivastava, M.K. and Shukla, R.S. (1998). Genetic analysis for yield and its components in soybean under different environments. *Crop Res. Hisar,* **16**(2): 196-201.

Singh, I. and Phule, P.S. (1999). Correlation and path coefficient analysis in soybean [G. max (L.) Merrill]. *Indian Legume Res.,* **22**(1): 67-68.

Tong, Y. (1986). Correlation and path analysis for the main quantitative characters of some spring soybean cultivars of the eastern of Halan mountains. *Ninzxia Agric. Sci. Tech.,* **6**: 31-34.