CHAPTER - V

DISCUSSION
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The main objective of plant breeding is to develop the varieties superior in all most all the characters including yield in comparison to the existing types with the help of associated characters of breeding value which result in maximization of production of crops plants.

The importance in quantitatively in herited attributes is based on the exploitation of genetic variability in the material for study. Variability being parameter measured the wide range of variation of a specific character and provides.

The chance to breeders for formulation of the breeding programme for improvement of self fertilized crop like chick pea.

The variance ratios of all the eight characters were found significant which indicated that the choice of variety was appropriate for the present investigation.

The genotypic as well as phenotypic variation of most of the characters were found high which were in agreement that the selection through these characters can be made easily correlation study.

Only four characters viz. plant height, no. of branches per plant no. of pod per plant and no. of seed per pod were found with positive and significant correlation with yield which indicated that these four characters had their true relationship with yield.
Following authors with also reported the same finisings the names of au-
tor have been given under that character which was found positively and signifi-
cantly correlated with yield by them.

**Plant Heght:**


**No. of Branches per plant:**

Gupta et al. (1972), Bahl et al. (1976), Singh wt al. (1976), Tyagi et al. (1982), Tomar et al. (1982), Islam et al. (1984), Sharma et al. (1988), Jivani and Yadavendra (1988), Sindhu and Mandal (1989) and Rao et al. (1994)

**No. of pod per plant:**


**No. of seed per pod:**


**Path analysis study:**

To determine direct and indirect effects of different characters on yield we calculated path analysis. According to correlation analysis only four characters viz. plant height, no. of branches per plant, no. of pod per plant and no. of seed per pod
were found significantly correlated with yield. So, we shall give analysis upon only these four characters.

The height direct effect (1.584) was shown by no. of pod per plant. The indirect effects of this trait were found lesser than the direct effect.

The second hight indirect effect was exhibited by no. of seed per pod (0.416) which indicated about its importance to contribute the yield.

The direct effect of plant height (0.064) was found lesser than the indirect effect via no. of pod per plant (0.899) which indirect that character was influenceing the yield indirectly through pod number.

The direct effect of no. of branches per plant (-0.393) was found negative which was irrevlevant to positive correlation of this trait with yield (0.644) which indirect that this characters was influencing the yield indirectly through other traits. The height and positive indirect effect (1.335) was found via no. of pod per plant. It means this trait too was influencing the yield through pod number.

On the basis of path analysis it was centered that no of pod per plant was the most important yield influencing character.

**Heritability and Genetic advance study:**

All the characters expect no. of seed per pod were found with high heritability. No. of pod per pod showed medium heritability. High or medium heritability indicated that these characters can also be utilized in further breeding programme. The genetic advance of no. of pod per plant was found very high. High heritability and genetic advance indicated the superierity of no. of pod per plant and this trait
especially can be utilized in further breeding programme.

It is, therefore, suggested that the selection methodology can be adopted in chick pea to enhance the yielding ability. The plant with more no. of pod and more no. of seed per pod most be selected during selection programme.

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