SUMMARY

The present investigation, "A study of genetics of yield components in barley (Hordium vulgare L.)" had been started during the rabi season of 1991-92.

The seed of thirteen varieties of barley were obtained from Brahmanand Mahavidyalaya, Rath (Hamirpur) U.P. The material was sown on the farm of Brahmanand Mahavidyalaya, Rath, Hamirpur (U.P.) in Randomized block Design with three replications. It was sown on November 13, 1991.


Day to flower
Height of plant
No. of tiller per plant
Length of ear
No. of spikelet per spike
Days to maturity
No. of seed per ear
100 seed weight

Yield per plant had been recorded proper statistical method had been adopted for the following calculations.

1. Analysis of variance
2. To estimate genotypic and phenotypic variations
3. To estimate correlation coefficients

4. To estimate direct and indirect effect of different characters on yield through path analysis.

5. Heritability and genetic advance.

The genotypic as well as phenotypic variability of all characters except day to maturity were found high which indicated that the selection can be made through this characters.

The genotypic correlation of yield with No. of tiller per plant, length of ear, No. of spikelet per spike and No. of seed per ear were found positive and significant were as the yield was found negatively and significantly correlated with Height of plant, Days to maturity and 100 seed weight which indicated the real associationship of yield with the above characters.

The direct effect height of plant on yield was found negative with high magnitude. The indirect effects were lesser than direct effect via any characters.

Similarly the magnitude of direct effect of No. of tiller per plant on yield was higher than any indirect effects.

The direct effect of length of ear on yield was found positive and high which is higher then any positive indirect effects.
The direct effects of No. of spikelet per spike on yield was found negative but the correlation found positive. It means the positive correlation might have come due to positive indirect effect. The higher magnitude positive indirect effect found via No. of seed per ear followed by Height of plant.

The direct effect of Days to maturity on yield was found positive but the correlation found negative which indicated that the negative correlation might have come due to height of plant and No. of seed per ear because of having higher magnitude of indirect effects in negative order.

The direct effect of No. of seed per ear on yield was found positive but the magnitude indirect effect via height of plant was found higher then direct effects.

The direct effect of 100 seed weight on yield was found not higher then the indirect effect via No. of seed per ear.

The heritability percentage of high characters viz., Days to flower, height of plant, No. of tiller per plant, length of ear and No. of spikelet per spike were found high were as Days to maturity, No. of seed per ear, 100 seed weight and yield per plant sowed medium heritability.

The genetic advances of all the character were found low which indicated that the selection this characters
will be faithful.

The present investigations it has suggested that selection methodology can be adopted for the improvement varley crop. considering early maturity, small graind, short starchasd, more tillers, long dared more spikeleted and more seeded plant.