

Effect of Various Population Schemes on Mean, Variance, and Coefficient of Variation of Yield and Yield Attributes in Sunflower (*Helianthus Annus* L.)

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ABSTRACT

The present investigation was carried out at Regional Agricultural Research Station, Nandyal, Andhra Pradesh to study the effectiveness of various population improvement schemes in improving yield and yield attributes. The Morden open pollinated population was chosen for imposing population schemes like mass selection, half sib, full sib selection and selfed progeny selection schemes. The base population allotted for various selection schemes revealed that the attributes plant height, head diameter, 100-seed weight, oil per cent, oil yield and seed yield / plant exhibited wider variability in the form of mean, range, variance and coefficient of variation. Increase in head diameter, oil per cent and seed yield / plant were found in MS_2 *kharif* and *rabi* seasons over that of MS_0 population. Whereas in BS_2 population, in different seasons, the mean values of all the yield attributes were lower than BS_0 and BS_1 populations except 100-seed weight and oil percent in summer season. The HS_2 and FS_2 population showed increased mean values in oil yield and seed yield/plant over the base population. However, HS_2 population further showed an improvement in the mean values in the attributes like head diameter, 100-seed weight and oil percent. However, in S_2 bulk population, oil yield and seed yield / plant were mostly affected characters when compared to S_0 and S_1 populations. The variance and co-efficient of variation were reduced as the generations advanced in all the populations of mass selection, bulk sib selection, half sib, full sib selection and selfed progeny selection schemes.

Key words : Coefficient, Sunflower, Yield.