

Comparative Evaluation of Population Improvement Schemes in The Second Generation Seasons for Yield and Yield Attributes in Sunflower (*Helianthus Annus L.*)

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ABSTRACT

The present investigation has taken up to study the effect of various selection schemes in the second generation of sunflower and the following observations were observed from Base population to second generation in all the schemes. Increase in head diameter, oil per cent and seed yield / plant were found in MS₂ *kharif* and *rabi* seasons over that of MS₀ population. Whereas in BS₂ population, in different seasons, the mean values of all the yield attributes were lower than BS₀ and BS₁ populations except 100-seed weight and oil percent in summer season.

The HS₂ and FS₂ population showed increased mean values in oil yield and seed yield / plant over the base population. However, HS₂ population further showed an improvement in the mean values in the attributes like head diameter, 100-seed weight and oil percent. However, in S₂ bulk population, oil yield and seed yield / plant were mostly affected characters when compared to S₀ and S₁ 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 : Comparative Evaluation, Generation Seasons, Yield.