

**RESEARCH PAPER****Economic heterosis study in sunflower (*Helianthus annuus* L.) for seed and oil yield in newly developed hybrids**

S.S. Lakshman

AICRP-Sunflower, Nimpith Centre, RAKVK, Nimpith, 24 Parganas (S) (W.B.) India

(Email: lakshmanshyam_ss@yahoo.co.in)

Abstract : Present investigation was carried out to spot out the best hybrid combinations giving high degree of useful heterosis for economic traits like seed and oil yield in sunflower for identification of some superior sunflower hybrids. Economic/Standard heterosis is the measure of heterosis in terms of superiority over the standard check (s) / hybrid (s). The degree of heterosis varied for important useful characters among different crosses. Presence of high heterosis in certain crosses and low in others suggested that the nature of gene action varied with genetic architecture of the parents. A total of 17 sunflower hybrids along with the three national checks, LSFH-171, KBSH-53 and DRSH-1 were evaluated in a Randomized Block Design during *Rabi*-2017-18 and 2018-19 at Nimpith centre. For oil yield (kg/ha), the highest standard heterosis was observed in sunflower hybrid CMS-852A x RHA-138-2 which oil yield was recorded 25.4 per cent higher against LSFH-171, 20.4 per cent higher against KBSH-53 and 26.2 per cent higher against DRSH-1, respectively. The significant economic/standard heterosis were also observed in experimental sunflower hybrids *viz.*, CMS-852A x EC-601971 for oil yield, 23.3 per cent higher than LSFH-171, 18.4 per cent higher than KBSH-53, 24.1 per cent higher against DRSH-1, respectively, CMS -853A x EC623025 for oil yield, 19.1 per cent higher than LSFH-171, 14.4 per cent higher than KBSH-53, 19.9 per cent higher against DRSH-1, respectively, CMS-853 A x EC 623023 for oil yield , 19.1 per cent higher than LSFH-171, 14.4 per cent higher than KBSH-53, 19.9 per cent higher against DRSH-1, respectively and CMS-852A x EC-601957 for oil yield, 19.0 per cent higher than LSFH-171, 14.3 per cent higher than KBSH-53, 19.8 per cent higher against DRSH-1, respectively.

Key Words : Sunflower, Economic heterosis, Seed yield, Oil yield

View Point Article : Lakshman, S.S. (2020). Economic heterosis study in sunflower (*Helianthus annuus* L.) for seed and oil yield in newly developed hybrids. *Internat. J. agric. Sci.*, **16** (2) : 154-159, DOI:10.15740/HAS/IJAS/16.2/154-159. Copyright@2020:Hind Agri-Horticultural Society.

Article History : Received : 07.03.2020; Revised : 27.04.2020; Accepted : 02.05.2020