

International Journal of Agricultural Sciences Volume **12** | Issue 1 | January, 2016 | 51-55

■ e ISSN-0976-5670

DOI:10.15740/HAS/IJAS/12.1/51-55 Visit us : www.researchjournal.co.in

RESEARCH PAPER

Combining ability analysis for yield and its components in sunflower (*Helianthus annuus* L.)

S.R. SHINDE*, R.B. SAPKALE AND R.M. PAWAR¹ Division of Agricultural Botany, College of Agriculture, KOLHAPUR (M.S.) INDIA (Email : sshivaji87@yahoo.in; rbkoli10408@gmail.com)

Abstract : Five lines were crossed with 10 testers in L x T mating design to estimate the combining ability for seed yield in sunflower. Non-additive genetic variance played a predominant role in the inheritance of all the characters studied *viz.*, days to 50 per cent flowering, days to maturity, plant height, head diameter, number of seeds per head, 100 seed weight, seed yield per plant, hull content, volume weight and oil content. The lines CMS-148 and CMS-607 and testers SVR-467, SVR-490 and SVR-491 can be considered as superior parents in the present study as they recorded high *per se* performance with positively significant general combining ability effect for seed yield per plant. Good general combiners for seed yield were also the good general combiners for one or more yield contributing traits. Among the 50 hybrids evaluated, crosses *viz.*, CMS-107 x SVR-472, CMS-378 x SVR-444 and CMS-351 x SVR-495 were considered as superior hybrids as they recorded high *per se* performance and significant specific combining ability effect for seed yield per plant.

Key Words : Sunflower, Combining ability, Yield, Additive, Non-additive gene effects

View Point Article : Shinde, S.R. Sapkale, R.B. and Pawar, R.M. (2016). Combining ability analysis for yield and its components in sunflower (*Helianthus annuus* L.). *Internat. J. agric. Sci.*, **12** (1) : 51-55.

Article History : Received : 18.08.2015; Revised : 23.11.2015; Accepted : 05.12.2015

* Author for correspondence

¹Division of Agricultural Botany, Bharati Vidyapeeth's Loknete Mohanrao Kadam College of Agriculture, Kadegaon, SANGLI (M.S.) INDIA (Email: ranveer_1972@rediffmail.com)