

**GGE BIPLLOT ANALYSIS VISUALIZATION OF MEAN PERFORMANCE AND STABILITY
FOR SEED YIELD IN SAFFLOWER (CARTHAMUS TINCTORIUS) AT DIVERSE
LOCATIONS IN INDIA**

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ABSTRACT

Twenty three genotypes of safflower were grown at 14 diverse locations ranging from 13°56'N to 30°26'N latitude and 74° 25'E to 88° 15'E longitude covering vast area of India. The total sums of squares were 75.58% for environment, 6.53% for genotype, and 17.89% for the interaction for seed yield per hectare. Genotypes like NARI 63, NARI 62, SSF 708, SSF 773, SSF 98, SSF 99, SSF 104, SSF 710, AKA 98-3, NARI 63, A-1 and PBNS 83 exhibited consistency for yield over all sites while genotypes like SSF 773, JSI 120, JSI 117, AKS 311, PBNS 88 and JSI 132 were most unstable performer across the locations because of their extreme adaptability to some specific locations. The SSF 773 gave highest yield at *Bathinda Tandur*, *Raichur* and *Achalpur* while NARI 63 at *Berhampore* and *Akola* locations. However, NARI 62 and SSF 708 were best adaptive to *Dharwad* and *Parbhani*. At *Annigeri* site PBNS 90 was the winner genotype. Biplot analysis showed genotypic like NARI 63, NARI 62 and SSF 708 had additive gene(s) for increasing yield potentials and can prove better donor for developing genotypes having wider adaptability for high yield in safflower.

KEY WORDS: Safflower, *Carthamus Tinctorius*, Stability Analysis, Ggebiplot, Genotype by Environment Interaction