

## GENETIC DIVERGENCE STUDIES IN ASH GOURD [*BENINCASA HISPIDA* (THUNB.) COGN.]

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**Abstract:** An experiment was carried out to analyze genetic diversity for yield and its contributing traits in 60 ash gourd genotypes at Research cum Instructional Farm, Indira Gandhi Krishi Vishwavidyalaya, Raipur (C.G.), India, during Kharif 2015-16. The cluster analysis grouped all 60 ash gourd genotypes into 5 major clusters based on D<sup>2</sup> value. Extreme genetic divergence was estimated among clusters. Maximum number of genotypes were grouped into cluster I included nineteen genotypes, whereas, cluster IV included seventeen genotypes. The cluster V had seventeen genotypes, cluster II included five genotypes and which is followed by cluster III had only two genotypes in each cluster. Average inter cluster distance was found maximum (10.742) between cluster III and cluster II which would be fruitful for developing heterotic cross combination. Cluster III showed highest mean value for number of branches per plant, fruit length, fruit girth, average fruit weight, number of seeds per fruit, number of fruits per plant, total soluble solid, 100 seed weight and fruit yield per plot (kg). The characters like number of seeds per fruit, duration of crop, 100 seed weight contributed maximum to divergence. Hence, ash gourd crop improvement could be tried with the genotypes of divergent clusters for better heterotic effects.

**Keywords:** Ash gourd, Cluster, divergence, Genotypes, Yield

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