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Genetic variability, heritability and expected genetic gain for dry root yield in ashwagandha [*Withania somnifera* (L.) Dunal]

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ABSTRACT : Forty-six genotypes of ashwagandha were studied in a field experiment under North Gujarat condition. The observation on twelve morphological and biochemical traits were recorded. The analysis of variance indicated presence of considerable amount of variability in the population of genotypes studied. The highest GCV was observed for dry root yield per plant, total alkaloid content, number of primary and secondary branches and number of berries per plant. High heritability along with high genetic advance was observed for dry root yield per plant, total alkaloid content in roots and number of secondary branches. High heritability estimates along with high GA indicates that variation for these characters is due to additive gene effects and consequently the scope is more for improving dry root yield per plant and total alkaloid content through selection.

KEY WORDS : Ashwagandha, GCV, PCV, Heritability, Expected genetic advance

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