

Character association and path co-efficient analysis for various traits in grain amaranth (*Amaranthus* spp.)

L. VENKATESH¹, NIRANJANA MURTHY², MANJAPPA¹ AND S.D. NEHRU³

¹Department of Genetics and Plant Breeding, University of Agricultural Sciences, G.K.V.K., BENGALURU (KARNATAKA) INDIA

Email : gmanju4132@gmail.com

²All India Co-ordinated Research Network on Underutilized Crops, University of Agricultural Sciences, G.K.V.K., BENGALURU (KARNATAKA) INDIA

³All India Co-ordinated Research Project on Chickpea, University of Agricultural Sciences, G.K.V.K., BENGALURU (KARNATAKA) INDIA

One hundred genotypes of grain amaranth were used to estimate correlation and path co-efficients among 10 quantitative traits including grain yield in grain amaranth. At the phenotypic level, stem girth, number of leaves per plant, plant height, panicle length and seed weight exhibited significant positive correlation with grain yield. While, its association with panicle width was negative and significant. Path co-efficient analysis revealed maximum positive direct effect of number of leaves per plant (0.575) on grain yield followed by seed weight (0.234), panicle length (0.221) and plant height (0.124). The study suggests that selection of varieties with higher number of leaves per plant, seed weight, panicle length and plant height will help the breeder to select the genotypes which can give better grain yield.

Key words : Grain amaranth, Grain protein, Character association, Path co-efficient analysis

How to cite this paper : Venkatesh, L., Murthy, Niranjana, Manjappa and Nehru, S.D. (2014). Character association and path co-efficient analysis for various traits in grain amaranth (*Amaranthus* spp.). *Asian J. Bio. Sci.*, **9** (1) : 97-100.