RESEARCH PAPER

Association studies for morphological and biomass traits of *Bauhinia variegata* Linn.

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Abstract : *Bauhinia variegata* (Kachnar) is an important tree species of India which produces nutritive and palatable leaf fodder. It is generally preferred by the farmers of Himachal Pradesh and Uttrakhand for livestock feeding at the time of fodder scarcity. Keeping its importance, 48 plus trees were selected from different parts of Himachal Pradesh. Seeds were collected from these trees and sown in nursery under randomized block design to assess the association among different morphological and biomass traits. After 16 month growth, data were recorded and statistically analyzed for association studies. A strong simple, genotypic and phenotypic correlation was observed between biomass traits and some morphological traits especially collar diameter, plant height and leaf area. The phenotypic correlation coefficients were lower than their corresponding genotypic values, which revealed that magnitude of correlation coefficient at genotypic level was higher than their corresponding phenotypic coefficient of correlations. Present study indicates that collar diameter, plant height and leaf area are the common causal factor that influences biomass productivity of *Bauhinia variegata* genotypes. Therefore, these characters may be given proper emphasis during selection programme of a fodder tree species where the amount of leaf and biomass production is of immense importance.

Key Words : *Bauhinia variegata*, Association, Genetic correlation, Leaf fodder, Morphological traits

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