Evaluation of Yield Components in 90 Grapevine Cvs Using Path Analysis

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To study genetic diversity and relationship among vine yield components, 90 cultivars from grapevine (*Vitis vinifera*) collection were selected and evaluated in 1997. Vines were planted in a density of 2 meter in row and 3 meter between rows. Using bilateral cordon trellising system and all vines were spure pruned. Experiment was conducted in Complete Rondomized Block Design with 3 replications of one vine plot and two samples in each vine.

Some characters (bunch weight, bunch number per vine, bunch size, berry weight, berry number, berry size, seeds number, seed weight, total soluble solid and acid content) were evaluated.

The results of phenotypic coefficient of variation and variance analysis appeared significant ($p < 0.01$), indicating that there is a huge variation among cultivars for evaluated characters.

The results of phenotypic correlation, multiple regression and path analysis for yield of vine, bunch and berry showed that bunch number per vine, bunch weight, berry number and weight characters had the greatest effect on vine yield (78% of total variance). In addition bunch weight, berry weight, berry number and bunch length had the most effect on bunch yield (85% of total variance) and finally length and size of berry and number of seeds per berry had enormous effect on berry yield (84% of total variance).

Key words: grapevine, path analysis, yield components.