EFFECT OF GARLIC AND ONION EXTRACTS ON BUD BREAK, GROWTH, YIELD, BERRY QUALITY AND SEASONAL CHANGES OF SOME CHEMICAL CONSTITUENTS OF "FLAM SEEDLESS"AND "SUPERIOR" GRAPEVINES (*Vitis vinifera* L).

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ABSTRACT

This investigation was carried out during two successive seasons of 2006 and 2007 to investigate the effect of garlic and onion extracts on bud break, growth, yield ,berry quality and some chemical constituents of "Flam Seedless" and "Superior" grapevine cultivars. The trees were grown in loamy sand soil, sprayed with seven treatments (garlic extract at 10, 15 and 20%, onion extract at 10, 15 and 20% and control).Generally, it was found that all studied growth parameters i.e., date of bud break ,percentage of bud break, number of cluster/vine, yield(kg)/vine, yield components (cluster weight, length and width, number of berries per cluster, weight of 100 berries, berries length and width), as well as seasonal changes in some chemical constituents of buds (water content %, total carbohydrates, total sugars and reducing sugars ,total free amino acids, total indoles and plant hormones (IAA and GA_3). As well as some chemical constituents of berries (total soluble solids (T.S.S.) and reducing sugars) were increased with the application of the different treatments. The best results were obtained from the treatments of garlic or onion extract at 15 % followed by 20 %. On the contrary, the same treatments decreased total acidity in berries, free phenols and ABA in buds as compared to the control. It could be recommended to use garlic or onion extract at the rate of 15 % for improving bud break, berries quality, growth, yield and chemical constituents of grape buds .

Key Words: Grapevine (*Vitis vinifera* L)**,** garlic extract, onion extract , bud break , growth, yield, chemical constituents.