

## Abstract

Bitter cucumber (*Citrullus colocynthis* L.) is family (*Cucurbitace*). great importance. In order to investigate the influence of evaporation and salicylic acid, Chitosan solution in terms of low-lift irrigation based on qualitative and quantitative characteristics of bitter cucumber varieties test in gldasht, 94-95, in the form of the plot in a randomized complete block design, with three replications, in the research farm of College of agriculture located in the well of the half. Drought stress include: (A1) capacity 75% of farm irrigation (control), (50% irrigation farm capacity (A2 (medium tension), (A3), 25% of the irrigation capacity of farm (tension) as the main factor and soluble levels of acid-throwing salicylic acid (242/0 g/l), and Chitosan (5 g/l) as a subsidiary factor. the evaluation of the characteristics are:Plant height, number of branches, rooty height, number of seeds per head, 1000 seed weight, , seed protein, seed oil and carbon hydrate dissolved in seed, leaf area index and leaf chlorophyll, Proline content in pollen, and stage.The variance of the data, with the use of SAS software version 9.1 and compare the average forklift using a Duncan test, at the level of 5% and ensure a draw the shape of the Word and EXCEL software. The results of this study indicate that water stress reduced the shoot length, number of branches, fresh and dried fruit, fruit length and diameter, seed weight, leaf area index. Salicylic acid and chitosan increases morphological characteristics (length, Tdadshakhh, during and Qtrmyvh, fresh weight and dry fruit, seed weight, leaf area) and physiological traits (Drsdprvtyyn and oil-soluble carbohydrate grains, proline, chlorophyll a and b and anthocyanins) was. It seems spraying a mixture salicylic acid and chitosan can be used to increase cultivation of watermelon and fruit yield in the region of Sistan proposed.

**Key words:** Salicylic acid, Chitosan, Drought stress, *Citrullus colocynthis* L.



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**Title**

**Effects of drought stress, chitosan and salicylic acid foliar spray on quantitative and qualitative traits of bitter cucumber**

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