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THE EFFECT OF THIOBACILLUS AND SULFUR ON QUANTITATIVE AND QUALITATIVE PROPERTIES OF CUCURBITA PEPO UNDER DEFICIT IRRIGATION

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Dietary plants and herbal preparations have been traditionally used as medicine in developing countries and obtained a resurgence of use in the United States and Europe. Medicinal pumpkin (*Cucurbita pepo* convar. *pepo* var. *styriaca*) is an important annual plant that belongs to Cucurbitaceae family. The present study was carried out to assess the effect of Thiobacillus and sulfur on quantitative and qualitative properties of medicinal pumpkinunder deficit irrigation. The experiment was carried out in a split-plot design. For this purpose, deficit irrigation was applied as a main factor in three levels (control, no irrigation in flowering stage, no irrigation in fruiting), and Thiobacillus and sulfur fertilizers as sub-plots (250 kg/ha). The results showed deficit irrigation significantly reduced fruit weight, fruit yield, and 1000-seed weight. In contrast, Thiobacillus + sulfur significantly increased fruit weight, fruit yield, 1000-seed weight, seed yield, and oil content. Furthermore, deficit irrigation and fertilizers influenced fatty acid of medicinal pumpkin. The fatty acid profile of the oil showed that is composed primarily of oleic, linoleic, palmitic, stearic, and linolenic acids.

Keywords: *Cucurbita pepo*, Thiobacillus, sulfur, Deficient irrigation