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CO₂ ASSIMILATION RATE APPLIED THROUGH IRRIGATION WATER ON MELON CROP IN PROTECTED ENVIRONMENTAL CONDITIONS

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The artificial increase effects of CO₂ concentration on plants for obtaining products in greater quantity with a better quality permit us to know the capacity of the plants to adapt themselves in environment with high CO₂ concentration. In this research, the CO₂ assimilation rate and the productivity of melon crop (*Cucumis melo*, L.) were quantified, and the chemical characteristics of the fruits were evaluated at harvest. The study was carried out in greenhouse conditions with carbon dioxide applied through irrigation water to determine its effects on melon crop production and CO₂ assimilation rate. The trickle irrigation system was used. The dose of CO₂ used was 50 kg.ha⁻¹ from transplanting to harvest. The carbon dioxide application through irrigation water did not alter the melon crop season, and it did not affect the fruit chemical characteristics, such as soluble solids content, total acidity and pH. The highest yield (28,68 t.ha⁻¹) and CO₂ assimilation rate were obtained with carbon dioxide application through irrigation water.



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