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Densidades de población, arreglos de dosel y despuntes en jitomate cultivado en hidroponía bajo invernadero
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Abstract

In this work the response of tomato (Lycopersicon esculentum Mill.) cv. Conteza to different combinations of population densities (6, 12, 16, 25 and 36 plants/m2), trimming levels (1, 2 or 3 fruit clusters per plant, and an untrimmed control) and canopy structure (uniform and stair-like) was evaluated. The experiment was done from July to December 1998 under greenhouse and hydroponics conditions. A randomized block design with four replications was used. The variables measured were : fruit yield (kg m-2) and its components (individual fruit weight and fruit number per square meter and per cluster), leaf area index (LAI) and percentage of photosynthetic active radiation (PAR) intercepted by the canopy. For yield, number of fruits per m2 and per cluster, mean cluster weight, LAI and intercepted PAR, significant differences were found but there was not difference for individual fruit weight. The treatment with stair-like canopy (density of 25 plants/m-2 distributed in five rows oriented in a north-south direction, where plants of first and fifth rows were trimmed to leave just one cluster, the second and fourth rows trimmed to leave two clusters, and the third row trimmed to leave three clusters per plant), produced the highest yield (25.5 kg m-2) and fruit number (219 fruits per m-2). The lowest yield (18.2 kg m-2) was obtained in the uniform canopy with plants distributed in five rows at 25 plants/m2 and trimmed to leave one cluster per plant. For the treatments with uniform canopy and trimmed to leave one cluster per plant, there were no significant differences in fruit yield when the plants were arranged in six rows and conducted to 36 plants/m2 or in five rows at 25 plants/m2.

Keywords

Lycopersicon esculentum, canopy structure, trimming, hydroponics, protected cultivation.