SOLARIZATION AND CHEMICAL PREPLANTING SOIL DISINFECTIONS EFFECTS ON STRAWBERRY PRODUCTION

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Abstract:

A 2-year study was conducted to determine the effects of solarization and chemical soil disinfections on crop performance and fruit quality of strawberry ‘Camarosa’. During the 2002/2003 season, experiments were established on a field that has been cropped with strawberries for several years and during 2003/2004 on a field that was subjected to a crop rotation (broccoli, melon and strawberry). Plants were grown in different soil disinfection treatments: soil solarization (black plastic mulch of raised beds - SSB), metam sodium (MS) and methyl bromide (MB) for the first year and soil solarization (clear plastic - SSC), SSC + MS, MS and MB for the second year. For the first year, MB plots had significantly higher fruit yield than MS and SSB plots, respectively 22 and 33% higher, while in the second year MS fruit yield equalled MB. Solarization with clear plastic enhanced strawberry yield but combined with MS did not improve it. Differences in soil treatments were not detected for fruit quality attributes.