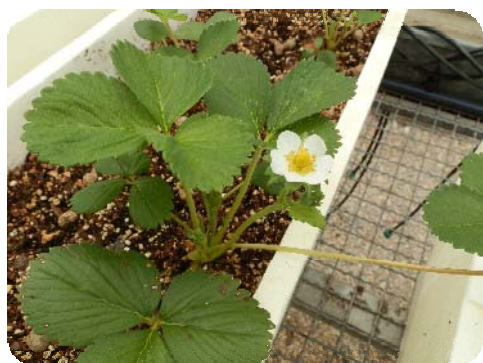




# Strawberry Cultivation Techniques for Season Extension.

## (ii) Effects of temperature and supplemental light

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### AIMS

The physiology of strawberry vegetative growth and flowering is complex due to a great variability of the plant behavior in response to temperature and photoperiod. Environmental factors such as temperature and light conditions can be limiting for plant growth during out-of-season production. To better understand the effects of temperature and photoperiod in day-neutral cultivars in a summer plantation for strawberry season extension, studies were performed to evaluate the effects of supplemental illumination, temperature (air heating) and substrate heating on growth and yield of two everbearing cultivars.

### MATERIAL AND MATERIALS

**Cultivation system:** substrate cultivation system in a glasshouse (INIAV - Oeiras)

**Plant material:** frigo and tip plants, 'Capri' and 'Zafir'

**Planting date:** 27 July

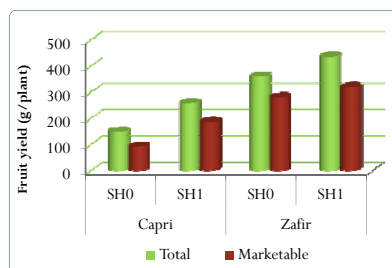
**Substrate heating:** without (H0) and with heating (H1)

**Supplemental illumination:** without (L0) and with high pressure sodium lamps, 2 hours everyday from 17:30 to 19:30 (L1), starting 30 October till end of experiment

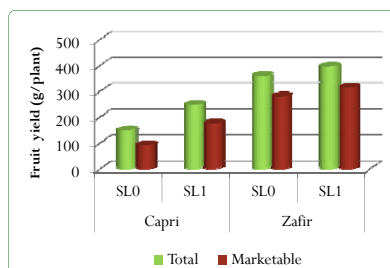
**Heating air temperature:** without (T0) and with heating (T1)



Effects of substrate heating



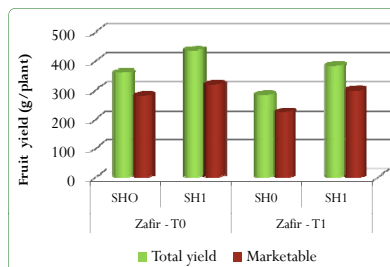
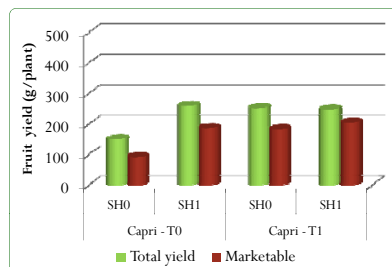
Effects of supplemental illumination



### MAIN RESULTS

Frigo plants of both cultivars performed better than tips plants. Both air temperature and substrate heating had increased fruit yield. Supplemental light during autumn period allowed the plants to produce more but it did not extend the fruit season production.

Effects of air temperature heating



### ACKNOWLEDGMENTS

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