

The biostimulant LALSTIM® OSMO reduced the incidence of blossom-end rot and increased the marketable yield on greenhouse tomato.



CONTEXT

LALSTIM OSMO contains glycine betaine, an osmolyte naturally enhancing stress tolerance in plants. Glycine betaine is quickly absorbed by the plants, where it maintains the water balance and the normal activity of plant cells during environmental stresses. It also improves the circulatory flow of nutrients in the plant. LALSTIM OSMO increases the capacity of greenhouse tomato to produce yield during unfavorable temperature, light and moisture conditions, and prevents the occurrence of physiological disorders in the yield, including blossom-end rot. LALSTIM OSMO is suitable for organic production.

OBJECTIVE

To study the effect of LALSTIM OSMO on yield and blossom-end rot incidence in commercially grown greenhouse tomato during summertime heat stress.

MATERIALS AND METHODS



LOCATION AND DATE

Commercial greenhouse, Finland
May–September/2020



CULTIVARS

Blossom-end rot susceptible 'Organza' and less susceptible 'Completo'



CULTIVATION AND SUBSTRATE

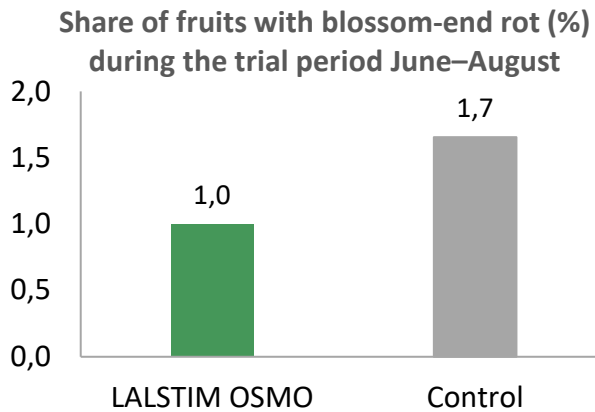
Peat-based growing bag (Kekkilä AirBoost R8422) with drip irrigation
Organic production



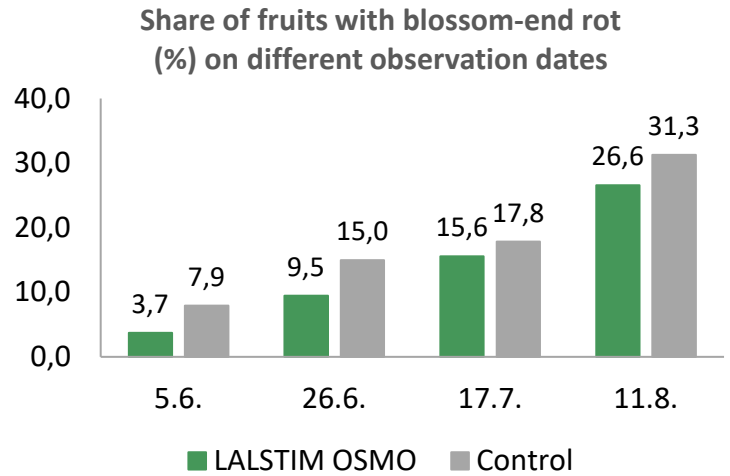
TREATMENTS

- 1) Untreated control
- 2) LALSTIM OSMO spraying (6 g/1 liter water) every 3 weeks

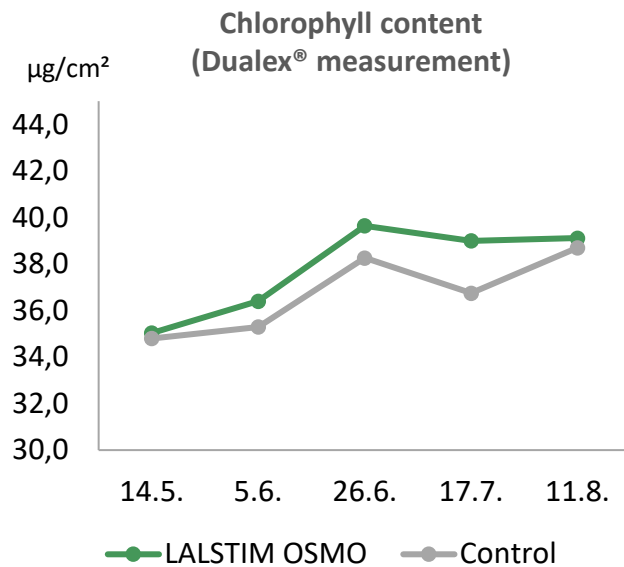
LALSTIM OSMO decreased the blossom-end rot incidence in tomatoes on 'Completo'.



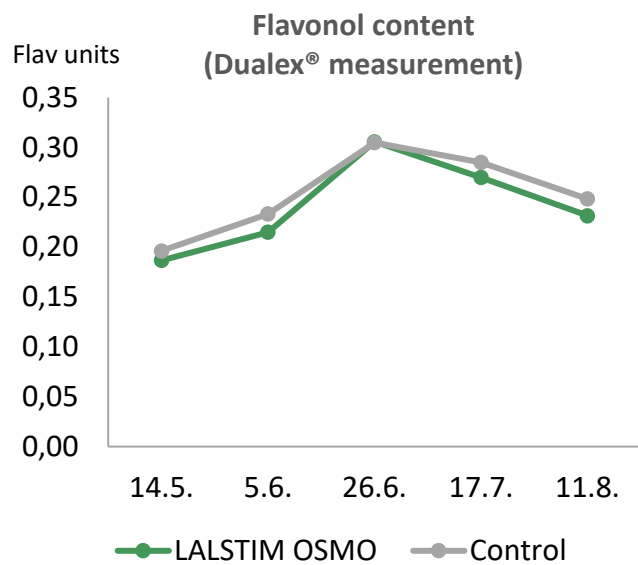
LALSTIM OSMO decreased the blossom-end rot incidence in tomatoes on 'Organza'.



LALSTIM OSMO increased the chlorophyll content in the leaves and improved thus the photosynthetic activity of the plants.



LALSTIM OSMO decreased the flavonol content in the leaves. Flavonol is an indicator of the stress level of plants.



LALSTIM OSMO increased the yield on both cultivars. The mean marketable yield per plant during the trial period.

