

Reaction of Three Strawberry Cultivars to the Growing Substrate Salinity: Generative Parameters

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Abstract

The study aimed at analysing the reaction of three strawberry *Fragaria ananassa* Duch. cultivars to the salinity (0-control, 0.5, 1.0, 2.0, 3.0 and 4.0 g of NaCl L⁻¹ in the irrigation water: equivalent of the following EC values: 0.73, 1.65, 2.66, 4.37, 5.93 and 7.81 mS cm⁻¹). Vegetation trial was carried out at the Faculty of Agriculture in Zagreb during 1997 and 1998. Following parameters were tested: yield of fruit (g/plant), number of fruits/plant, average mass of fruits, number of floral shoots, number of fruits/floral shoot and percentage of dry matter of fruits.

Sodium chloride had a significant impact on the fruit yield: yield reduction was observed in cvs. 'Elsanta' and 'Marmolada' at 0,5 g of NaCl L⁻¹, while in cv. 'Miranda' at 2,0 g of NaCl L⁻¹. Average reduction of yield under the influence of salinity was the highest in cv. 'Elsanta' followed by cvs. 'Marmolada' and 'Miranda' (reduced number of fruits and average of fruit mass). Dry matter percentage of fruits was increased in all three cultivars when nutrient solution contained 1.0 - 3.0 g NaCl L⁻¹. However, there was a significant reduction of dry matter percentage of fruits at the highest concentration of NaCl (4.0 g NaCl L⁻¹) in cvs. 'Elsanta' and 'Marmolada', but not in cv. 'Miranda'. Dry-matter percentage of fruits was significantly higher in cv. 'Miranda' than in cvs. 'Elsanta' and 'Marmolada'.

Key words: strawberry, NaCl, yield, mass of fruit, dry-matter percentage of fruits

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Reakcija tri kultivara jagode na zaslanjenost hranidbene podloge: generativni parametri

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Sažetak

Ispitana je reakcija tri kultivara jagode *Fragaria ananassa* Duch. na slanost (0-kontrola; 0,5; 1,0; 2,0; 3,0 i 4,0 g NaCl L⁻¹ vode za zalijevanje, što odgovara EC vrijednostima: 0,73; 1,65; 2,66; 4,37; 5,93 i 7,81 mS cm⁻¹). Vegetacijski pokus proveden je tijekom 1997. i 1998. godine na Agronomskom fakultetu u Zagrebu. Testirani su sljedeći parametri: prirod ploda (g/biljci), broj plodova/biljci, prosječna masa ploda, broj cvatnih izbojaka, broj plodova/cvatnom izbojku i % S.T. ploda.

Prirod ploda jagode bio je pod značajnim utjecajem NaCl; smanjenje priroda utvrđeno je u kultivara Elsanta i Marmolada pri 0,5, a u kultivara Miranda pri 2,0 g NaCl L⁻¹. Prosječno smanjenje priroda pod utjecajem soli bilo je najviše u Elsante, zatim u Marmolade pa Mirande (smanjen broj plodova i njihova prosječna masa). Primjena NaCl u koncentraciji 1,0-3,0 g NaCl L⁻¹ utjecala je na povećanje postotka suhe tvari ploda u sva tri kultivara jagode. Pri najvećoj koncentraciji NaCl (4,0 g L⁻¹) značajno je smanjen postotak suhe tvari ploda u kultivara Elsanta i Marmolada, ali ne i u kultivara Miranda. Postotak suhe tvari ploda bio je značajno viši u kultivara Miranda nego u kultivara Elsanta i Marmolada.

Ključne riječi: jagoda, NaCl, prirod, masa ploda, % S.T. ploda.

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