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Czech J. Food Sci.

E. Zelená, M. Holasová, F. Zelený, V.

Fiedlerová, P. Novotná, A. Landfeld, M. Houška:

Effect of Sulphur Fertilisation on Lycopene Content and Colour of Tomato Fruits

Czech J. Food Sci., 27 (2009): S80-S84

The effects of different sulphur (S) fertilisers (ammonium, sodium, potassium and calcium sulphates) in combination with nitrogen (N) on plant growth, yield and quality of fruits were investigated in two dwarf cultivars Proton and Šejk. Single N, applied as ammonium nitrate, stimulated growth of plants and significantly increased yield of fruits, but did not change content of lycopene as well as colour parameters (*a*, b** and *L**) and decreased significantly S content in fruits. All S fertilisers significantly increased S and lycopene content in fruits (up to 39% in cv. Šejk and 92% in cv.

Proton) and positively influenced colour of tomato puree, namely parameter *a**. The earlier cv. Šejk responded better to S supply than cv. Proton, which showed a negative yield effect esp. on variants where higher S doses were applied. Sodium sulphate undesirably significantly enhanced Na content of fruits in both cultivars.

Keywords:
tomatoes; lycopene; colour; sulphur; nitrogen; fertilisation

[fulltext]