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## Quality of Organic Tomatoes Grown in Two Different Locations

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### Abstract

Increased consumer awareness of food safety issues and environmental concerns has contributed to the growth in organic farming over the last few years. Generally, the public perceives organic foods as being healthier and safer than those produced through conventional agricultural practices.

The purpose of this study was to investigate the variations of some quality parameters as nutritional and technological properties in fifteen selected tomato cultivars from Germany, which differ in their colour, size and shape. These cultivars were grown in two locations: Ellingerode, Hessen (A) and Schönhagen, Thuringia (B).

Results showed significant differences between and within the locations. Regardless the location the highest content of ascorbic acid was found in Resi Gold (23.1 mg/100g FM) and Phantasia F1 (22.3 mg/100g FM), the highest value of phenolic compounds was found in Cuban Pink (150 mg/100 ml juice) and the lowest value was found in Ferline F1 (42.6 mg/100 ml juice). Resi Gold and SO30A expressed the highest concentration of dry matter, whereas the lowest one was found in Hybrid-2. Generally the highest content of juice was found in Phantasia F1 (54.1%) and lowest in Matina (23.9%). Ferlina F1 and Matina expressed the highest glucose and fructose levels in both locations. However, the lowest concentrations were found in Hybrid-2 and Celsior × Matina F6.

These results confirmed variations among the cultivars within and between the locations. Despite these variations, still there is a great possibility of use of these tomato cultivars for various aspects in high quality food industry for human consumption. For instance, we may recommend Matina for tomato paste production due to its high pulp content in fruit. Celsior × Matina F6, Gold × Matina, Resi Gold, Phantasia F1, Goldene Königin and Rosa Roma can be recommended as the best cultivars for human nutrition due to their high ascorbic acid content. Furthermore, Cuban Pink, Matina and SO30A can be recommended for human nutrition due to their high phenolic compounds content.

**Keywords:** Cultivars, nutritional quality, organic tomato