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OF SUGAR BEET RESEARCH

ABSTRACTS OF PAPERS

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**Maximising sugar beet performance
in a changing climate**

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2.6 ŽIVKO ĆURČIĆ¹, DRAGANA BUDAKOV², ALEKSANDRA STANKOV², KSENIJA TAŠKI-AJDUKOVIĆ¹, NEVENA NAGL¹, VERA STOJŠIN²

¹ Institute of Field and Vegetable Crops, Maksim Gorki st. 30, RS – 21000 Novi Sad

² Faculty of Agriculture, University of Novi Sad, Dositej Obradović square 8,
RS – 21000 Novi Sad

EFFECT OF DIFFERENT SOWING DATES ON *CERCOSPORA BETICOLA* INFECTION LEVEL

Cercospora leaf spot caused by the fungus *Cercospora beticola* is the most significant foliar disease of sugar beet in Serbia. Measures to reduce damage of this disease are based on the use of tolerant varieties, crop rotation and fungicide application. Climate changes and the resistance of *Cercospora beticola* strains to fungicides from the strobilurin group further complicate the fight against this disease. In extremely favourable years for the development of disease with high temperatures and precipitation during the summer months, growers in Serbia perform 4-8 fungicide treatments. Unfortunately, despite so many treatments, they fail to keep the disease under control. In order to overcome this challenge in sugar beet production, it is necessary to review the entire technology of sugar beet cultivation in Serbia. Primarily, measures that directly affect the microclimate in the sugar beet crop and the canopy size of the crop during the summer months: different sowing dates, mineral fertilisation and sowing density. Adjusting the sowing date is by far the most frequently investigated climate change adaptation option that determines the length of the growing season and influence on the crops yield. Earlier observations have shown that in later sowing periods, the infection of sugar beet with cercospora is lower than in the first sowing dates, and that later sowing could reduce the number of treatments against cercospora. Favourable conditions during the spring of 2019 made it possible to set up a trial with sowing dates from the beginning of March to the end of April. The trial included 9 different varieties of sugar beet. Assessment of cercospora infection was done in early August. The results showed significant differences in the level of cercospora infection between the examined sowing dates and between the tested varieties in the trial.