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**CHANGES IN PROLINE CONTENT AND LEAF TRAITS UNDER WATER
STRESS IN SUGAR BEET LINES AND HYBRIDS**

**Transformations de la teneur en proline et des propriétés des feuilles dans des
lignées de betteraves sucrières et d'hybrides suite au stress hydrique /
Veränderung von Prolingehalt und Blatteigenschaften in Zuckerrübenlinien
und -hybriden unter Trockenstress**

ABSTRACT

Sugar beet production in Serbia can be severely hindered by unfavorable environmental conditions, especially summer drought. The objective of this study was to investigate reaction of sugar beet lines and their hybrids to conditions of reduced water supply. Free proline content, lamina weight and specific leaf weight were analyzed, as traits that may play an important role in reaction of sugar beet to water stress. The experiment was conducted in the greenhouse and was repeated twice. As plant material were used four fertile monogerm inbred lines, previously selected for different ability to maintain turgor under water stress, two male-sterile monogerm testers, as well as eight hybrids. Plants were grown for eight weeks, until reaching the stage 10-12 leaves, when watering was reduced to 60% and 30% of their daily water need (DWN) for five weeks. Free proline content, lamina weigh and specific leaf weight were determined, as well as their general combining abilities for these traits.
