



**18th
European
Weed
Research
Society
Symposium**

EWRS 2018

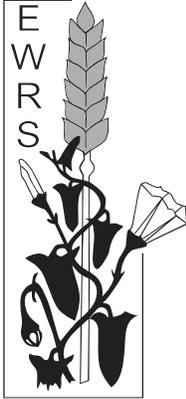
17-21 June 2018
Ljubljana, Slovenia

**New approaches for
smarter weed management**

Book of Abstracts

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The effects of herbicides to fresh and dry mass accumulation in maize linesMilena Simić¹, Vesna Dragičević¹, Katarina Jovanovic Radovanov², Milan Brankov¹¹Maize Research Institute, BELGRADE, Serbia²University of Belgrade, Faculty of Agriculture, BELGRADE, Serbia

Maize lines are susceptible to various stress factors, including herbicides. The experiment included three susceptible maize lines (ZPKŠ8/1-161su – L1, ZPP608-2/11112111k – L2 and ZPT165b – L3), tested in the field conditions during 2015 and 2016. Herbicide treatments were: nicosulfuron (H1), mesotrione (H2), tembotrione+isoxadifen-ethyl (H3), applied in BBCH 15-16 of maize lines at recommended doses (RD): H1 – 0.75 L ha⁻¹ (45 g ha⁻¹a.i.), H2 – 1.2 l ha⁻¹ (756 g ha⁻¹a.i.) and H3 – 2 l ha⁻¹ (840 + 420 g ha⁻¹a.i.) and double doses (DD): H1 – 1.5 L ha⁻¹ (90 g ha⁻¹a.i.), H2 – 2.4 l ha⁻¹ (1512 g ha⁻¹a.i.) and H3 – 4 l ha⁻¹ (1680 + 840 g ha⁻¹a.i.), and control was without herbicide application. Inbred lines leaves were sampled 2 days (phase I), 7 days (phase II) and 21 days (phase III) after herbicide application. Fresh mass (FM) and dry mass (DM), after drying at 60 °C were measured.

Higher fluctuations of FM in phase III, as well as DM in all three phases were present in 2016, in comparison to 2015. Phase I was characterised with slightly higher average FM in RD treatment, but higher FM in DD treatments for all herbicides, compared to control. In phase II, lines L2 and L3 had the lowest FM in H3 treatment. Nevertheless, H3 in DD expressed potentially stimulative effect, increasing FM values for L2 and L3 in RD and for L1 in DD. DD treatments were characterised with higher DM concentration for all three genotypes, compared to RD. Present data indicate that meteorological factors highly affect herbicide effect, elevating toxicity, even in phase I. However, up to the 21th day after application H3 expressed even stimulative effect by increasing FM and decreasing DM concentration in maize leaves.