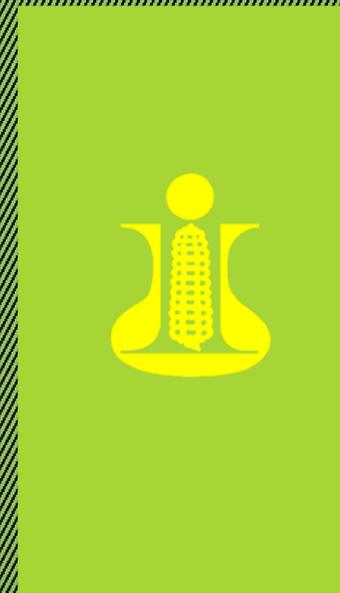


Resistance of small grains to toxigenic fungi of the *Fusarium* genus of the Liseola section

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INTRODUCTION

Resistance of durum (Cosmostar), triticale (Zenit), wheat (Aurelia) and barley (Nektar) to toxigenic fungi of the *Fusarium* genus of the Liseola section was observed in the present study. Fifteen isolates of fungi of the *Fusarium* genus of the Liseola section (*Fusarium verticillioides*, *Fusarium proliferatum* and *Fusarium subglutinans*) were selected from the collection of fungal cultures of the Maize Research Institute, Zemun Polje for studies.

METHODOLOGY

Spikes were inoculated in the early morning hours when more than 50% of the plants in the plot were in the full-blossom stage. Groups, each of 20 spikes, were inoculated per replication. The prepared inoculum amounted to 20 ml per replication. The spore concentration for the inoculum was 1×10^6 spores per 1 ml. In a negative control, spikes were inoculated with the same amount of sterile distilled water, while in the positive control, spikes were inoculated with the suspension of *Fusarium graminearum* spores. The inoculum was applied with the hand sprayer. After inoculation, spikes were covered with wet PVC bags to provide favourable conditions of moisture for the fungal development. Bags were removed after 48 h. After 3-week inoculation, the degree of infection was established on the 1-7 scale according to Blandino et al. (2012).



Inoculation with hand sprayer

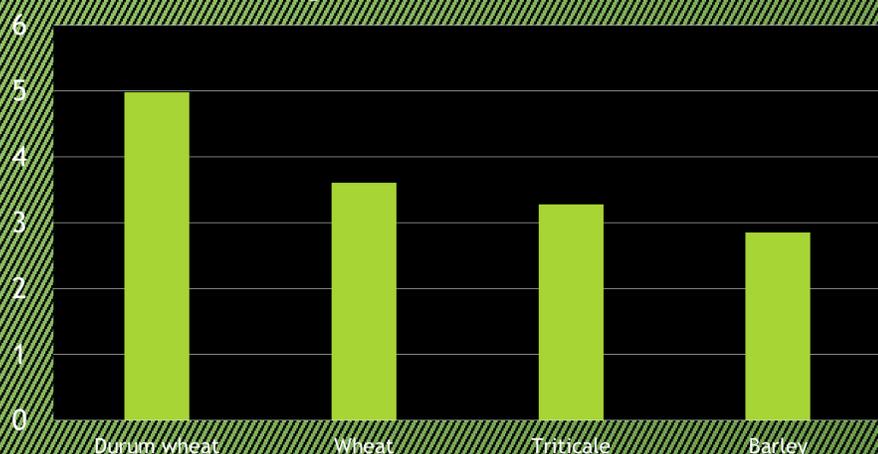


Field after inoculation

RESULTS AND CONCLUSION

The highest average rating was recorded in durum wheat (4.98), and the lowest in barley (2.85). These ratings in the remaining two plant species amounted to 3.61 (wheat) and 3.28 (triticale). The disease severity index (DSI) was the highest in durum (77.91%), then in wheat (65.42%), triticale (53.47%), while it was the lowest in barley (46.78%). Based on the gained results it may be concluded that the highest resistance to *Fusarium* species of the Liseola section was expressed by barely, while the lowest degree of tolerance was recorded in wheat.

Average rate of infection



DSI- Disease severity index

