

INCREASED INFESTATION OF AGRICULTURAL LAND WITH WILD OAT (*AVENA FATUA* L.) IN LATVIA AS RELATED TO VARIATION OF SEED MORPHOLOGY AND GERMINATION

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Abstract. Monitoring of *Avena fatua* was performed in 2013 and 2014 to detect a level of infestation in agricultural fields. In 2014 high infestation level was detected in 17% of the surveyed parishes, mostly in areas with large proportion of agricultural land. Seed samples were collected from 177 locations in different regions of Latvia. Variation in seed morphology was detected among the populations according to size, color, hair intensity and awn length. Seed germination tests showed differences in germination of seeds with different morphology, collected from different locations and in various years. Seed scarification promoted *A. fatua* germination in the laboratory conditions. Field emergence trials were performed in 2013 and 2014. Prolonged emergence of *A. fatua* in the field is an additional obstacle for successful control of this weed. Continuous monitoring and further studies are required to acquire information on possible hybridization of *A. fatua* with *A. sativa*, as well as on a development of herbicide resistance in *A. fatua* populations.

Key words: *Avena fatua*, weed monitoring, seed morphology, germination.