

ECOLOGICAL METHOD TO PREVENT FUNGAL DISEASES IN CEREALS WITH OZONATED WATER

Gabrielė Židonytė¹, Bronius Bakutis¹, Violeta Baliukonienė¹, Jurgita Jovaišienė¹

¹*Department of Food Safety and Quality, Veterinary Academy of Lithuanian University of Health Sciences
Tilžės 18, LT-47181; Kaunas, Lithuania, Phone +370 37 363208; e-mail: gabriele.zido@gmail.com*

Abstract. The aims of the present work were to determine effects of ozonated water in reducing the contamination of wheat with fungi in the fields and antifungal efficacy against *Fusarium spp. in vitro*. The organic winter wheat (*Triticum aestivum L.*) during shoots, flowering, maturity and harvesting growth stages was sprayed with 2.5-3.0 mg/L ozonated water.

In the field conditions on wheat fungal colony-forming units (CFU/g) count compared with the control group was lower: 64.2% (shoots growth stages); 76.3% (flowering growth stages); 78.5% (maturity); 65.4% (harvesting). The experimental results *in vitro* showed that 3.0-5.0 mg/L and 6.0 mg/L ozonated water had effect against to spores of *Fusarium spp* respectively 69-86% and 98 %.

Keywords: ozonated water, fungi, wheat, antifungal effect