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BOOK OF ABSTRACTS



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The influence of biofungicides on germination and protection of the seeds *Foeniculum vulgare* L.

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Abstract

There is no List of permitted plant protection products that can be used in medicinal and aromatic plant production. The effects of two biofungicides, from the List of permitted plant protection products used in organic production, on the seed quality and health of medicinal plant *Foeniculum vulgare* L. cv. 'Vojvođanski' were examined. The aim was to find products of plant permitted in organic production with beneficial effect on fennel seeds. Seed germination testing was done according to the Rule book on seed quality control, while the seed health was examined by the filter paper method. The treatment of the seed was done with solutions of biofungicides 'Extrasol F' and 'Polyversum'. The solutions of 'Extrasol F' were applied in concentrations of 0.20 ml/kg and 0.40 ml/kg, while the solutions of 'Polyversum' were applied in concentrations of 0.50 g/kg and 1 g/kg. Distilled water solely was used in the control. Seed examinations were done after 14 days. The results showed that biofungicides in the recommended concentrations of 0.20 ml/kg and 0.50 g/kg, had an effect of 73.3% and 64.7%, respectively, on germination, while in the concentrations of 0.40 ml/kg and 1 g/kg, the seed germination was lower by 5.7% and 1.7% than the control. Based on the symptoms of necrosis, dark mycelia and abundant sporulation observed on the seed surface, the fungus identified was *Alternaria* sp. The percentage of infected seeds was reduced (28% and 25.7%) after the treatment with lower concentration. The higher concentrations didn't reduce the percentage of infected seeds. Since these solutions of the biofungicides affect the seed germination, and they prevent infection, further research should be focused on achieving greater efficacy in protection of fennel seeds.

Key words: fennel seed, seed health, biofungicides, *Alternaria* sp.