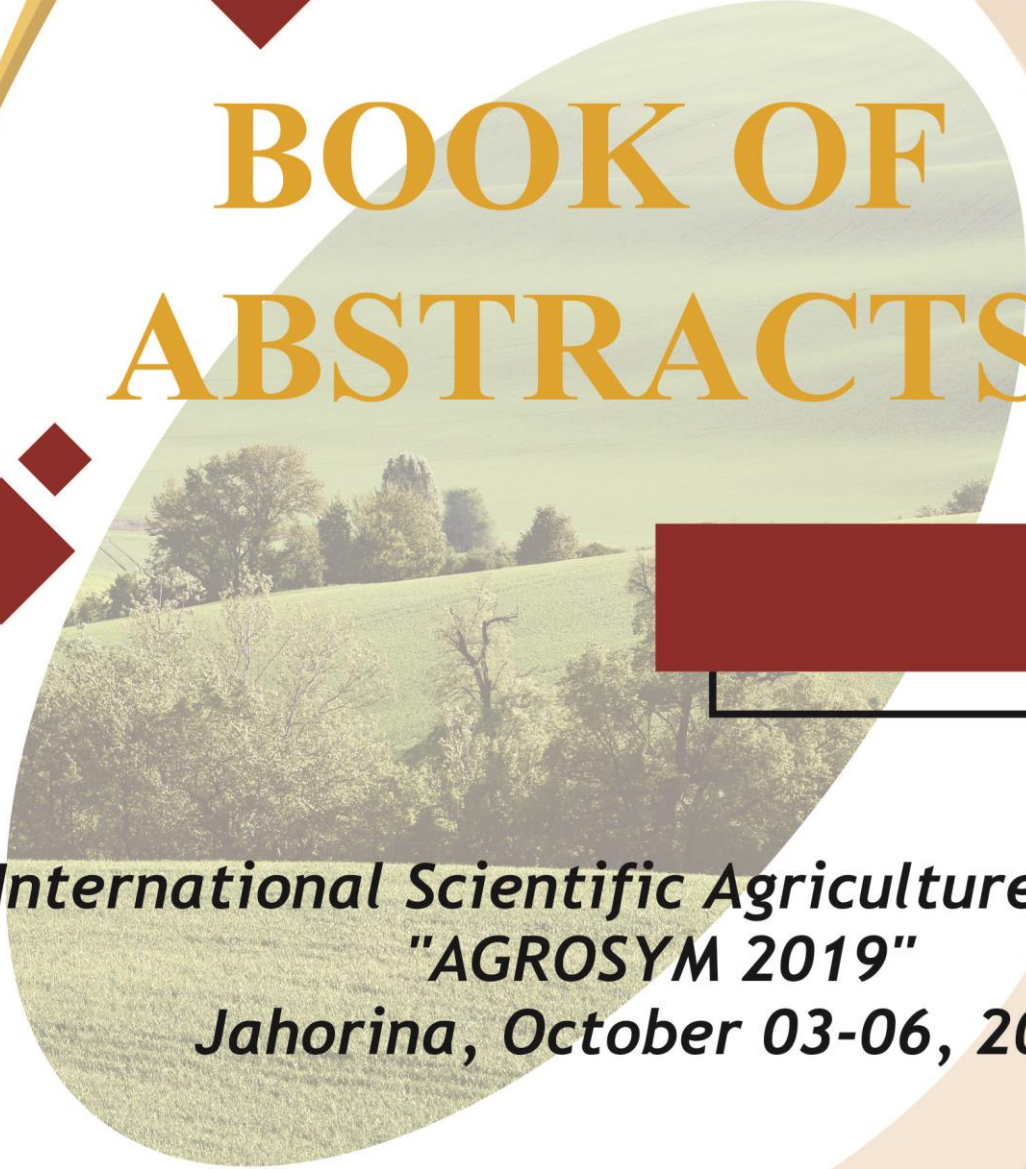






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**BOOK OF
ABSTRACTS**



***X International Scientific Agriculture Symposium
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EFFECTS OF AN INSECTICIDE OF NATURAL ORIGIN ON LESSER GRAIN BORER (*RHYZOPERTHA DOMINICA* FABRICIOUS; COLEOPTERA: BOSTRICHIDAE) AND QUALITY OF STORED WHEAT GRAINS

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Abstract

Modern methods of protection of stored wheat grains from insect pests strive towards optimizing the use of different techniques and methods within integrated pest management (IPM) programmes. In this study, the potential of synthetic insecticide of the natural origin Abamectin on *Rhyzopertha dominica* F. in stored wheat was examined. The research was conducted in three rates/doses of the tested insecticide (0.25; 0.5 and 1.0 mg a.s. kg⁻¹ of wheat) and the effects of its application, as well as the effects of infestation of *R. dominica* on certain physical and chemical traits of wheat grains were, also, examined. After 24 h of treated, 25 adults of *R. dominica* of both sexes were released into each vessel. Insect mortality was determined by manually removing from the infested wheat after 7, 14 and 21 days of exposure. Ten weeks after treatments, progeny emergence and progeny reduction were designated. Efficacy of Abamectin after 7 days of exposure in all applied dosages was low (< 56.5%). Abamectin efficacy was significantly increased after 14 days of exposure (ranged from 67.0%, 68.5% to 85.0%). Abamectin in all applied rates after 21 days of treatment was highly active (100%). Ten weeks after grain treatment, all three dosages of examined insecticide were prevented progeny emergence. Amount of the damaged grains and dockage, as a nus-product of feeding of *R. dominica* larvae and adult, compared with untreated, infested sample was significantly smaller which represent positive aspect of Abamectin application. Application of Abamectin was contributed to the significant difference in moisture content, but did not change significantly protein and ash content, in comparison with control. Untreated grain samples, infested with *R. dominica*, in relation to the other tested samples, showed the biggest change in technological grain properties of examined species.

Keywords: wheat, *R. dominica*, Abamectin, insecticidal activity, grain properties.