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STUDY OF THE SYNERGISM BETWEEN MICROBIOLOGICAL AGENTS IN CONTROL OF APPLE SCAR

Curiev Loredana
Institute of Genetics, Physiology and Plant Protection, Chisinau, Republic of Moldova
E-mail: loredana.curiev@igfpp.md

The apple during the vegetation is attacked by a wide complex of pathogens that lead to enormous losses of fruit, both in quantity and quality. Among the most dangerous, widespread and common diseases of the apple are: apple scar (*Venturia inaequalis*), powdery mildew (*Podosphaera leucotricha*), brown rot (*Monilinia fructigena*), fire blight (*Erwinia amylovora)*, and bacterial canker (*Pseudomonas syringae pv*. *syringae*).

The purpose of this study – evaluation of the synergism between microbiological agents *Pseudomonas fluorescens* AP-33 (trade name Rizoplan) and *Trichoderma lignorum* M-10 (trade name Trichodermin-SC) in control of the apple scar (*Venturia inaequalis* Wint). The experiments were mounted in the field in apple in 8 variants /3 repetitions/3 trees per repetition, according to approved methods. In the variant Standard was used chemical fungicide Jeck –Pot, EC (Difenoconazole+Penconazole 200+100 g/l). The biological efficacy in the control of apple scar in the result of the foliar application have been evaluated as followed: Rizoplan 2,0 l/ha - 72.3%; Trichodermin SC 2,0 l/ha - 76.6%; Rizoplan + Trichodermin SC 2.0 l/ha- 74.5%; Rizoplan 3.0 l/ha - 78.7%; Trichodermin SC 3,0 l / ha - 80.9% and combine application of the Rizoplan + Trichodermin SC 3,0 l / ha - 81.9%. The intensity of the disease development was maximum in the Control variant (4.7%) and minimum in the Standard variant 0.7%. In the variant Standard (Jeck –Pot, EC) with an application rate of 0.4 l/ha the biological efficiency reached 85.1%. The biological efficacy in fruits also depended on the application rate: variant Rizoplan 2.0 l/ha - 77.2%; Trichodermin SC 2,0 l / ha -78.6%; in the variant Rizoplan + Trichodermin SC 2.0 l/ha - 82.8%; Rizoplan 3.0 l/ha - 77.9% and Trichodermin SC 3.0 l/ha -79.3%; in the variant Rizoplan + Trichodermin SC 3,0 l / ha- 84.1%, the best efficacy. The biological efficacy against apple scar in the Chemical standard (Jeck –Pot, EC) with an application rate of 0.4 l/ha was 80.7%. In can be concluded that the application rate of 3.0 l/ha of the mixture Rizoplan + Trichodermin SC have demonstrated the highest efficacy in the control of apple scar: 81.9% - on leaves and 84.1% - on fruits.

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