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VINYL-TRIAZOLE DERIVATIVES WITH ANTIFUNGAL ACTIVITY AGAINST *Fusarium solani*

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Numerous species of Fusarium exist in soil, some of which are common plant pathogens, infecting seeds and seedlings, causing them the root rot. Among the pathogenic species of Fusarium frequently encountered in corn, wheat and soybean plants with root rot symptoms, we can mention *F. solani*, which has a very destructive effect on the grain germination, plant growth and development, leading to the loss of their viability. This pathogen is constantly present in soil, and under unfavorable environmental conditions it massively attacks weakened plants, polluting the grains/seeds with mycotoxins, which are particularly harmful to the animal and human body [1].

Purpose of the research consisted in the establishment of the anti-fungal activity of the vinil-triazolic compounds against the mentioned fungus, because the agriculture is requesting more and more efficient preparations against harmful phytopathogens.

Materials and methods. In the research, 2 isolates of *F. solani* were used, extracted from the basal part of the stem of common winter wheat with signs of root rot and identified according to [3]. The isolation of the fungi was carried out under aseptic conditions on PDA (Potatoes Dextrose Agar) medium [2]. The vinyl-triazole derivatives that were used in the study: EPS-860: ((Z)-1,3-bis(2,4-dichlorophenyl)-2-(1H-1,2,4-triazol-1-yl)prop-2-en-1-one), EPS 165: (z)-1-(2,4-dichlorophenyl)-5-methyl-2-(1h-1,2,4-triazol-1-yl)hex-1-en-3-one)) and EPS-297: ((Z)-1-(2,4-dichlorophenyl)-3-(2-hydroxyphenyl)-2-(1H-1,2,4-triazol-1-yl)prop-2-en-1-one), in concentrations of 0.00125; 0.0025; 0.005; 0.01; 0.02%. The Petri dishes with the

inoculated fungal colonies were maintained in a thermostat at a temperature of 24°C. The colony diameter was recorded based on 2 perpendicular diameters, the average of which served as a biometric index. The experiment was performed in 3 repetitions.

Results On the last day of data recording (the 7th), the 0.02% concentration produced an inhibition of 75.7-79.3% depending on the compound studied, and for the minimum concentration (0.00125%) of the 3 compounds, the level of colony growth inhibition was 19.8 ... 28%.

Conclusion The vinyl-triazole derivatives EPS-165, EPS-860, EPS-297 in concentrations of 0.02-0.00125% significantly inhibited the growth of *F. solani* colonies under *in vitro* conditions, which offers prospects for their use in plant protection measures against this pathogen.

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