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EFFICACY OF CLOROTHALONIL FUNGICIDE COMBINATIONS IN CONTROL OF CERCOSPORA LEAF SPOT

ABSTRACT

Sugar beet leaf spot, caused by Cercospora beticola Sacc., is the most important foliar disease of sugar beet in warm and humid environmental conditions, which regularly occurs during summer months in sugar beet growing regions in Serbia. In the absence of control measures in areas with high disease incidence, severe epidemics of Cercospora leaf spot (CLS) results in a significant reduction of root yield, recoverable sugar, sucrose concentration and in an increase of impurities leading to higher processing costs. CLS is primarily controlled by application of fungicides, most of which have a site-specific mode of action and posses a high risk for resistance development in target organisms. Since resistance is the most important limiting factor of CLS chemical control, the main aim of this work was to evaluate efficacy of chlorothalonil in combination with systemic and local systemic fungicides. Tetraconazole, carbendazim and azoxystrobin, representing each chemical group of systemic fungicides that is used for CLS control in Serbia, were tested alone and in combination with chlorothalonil. Results showed that each fungicide in combination with chlorothalonil was more effective in CLS control than corresponding single fungicide. Being multi-site protective fungicide, chlorothalonil proved to increase efficacy of tested fungicides and in perspective, it could postpone the emergence of fungicide resistance in C. beticola.

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