

## COMPARISON OF SALICYLIC ACID AND RIBOFLAVIN COMPOUNDS IN THE CONTROL OF SUGAR BEET POWDERY MILDEW IN GREENHOUSE

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### Abstract:

Sugar beet (*Beta vulgaris*) is one of the main agricultural crops in the world and powdery mildew is one of its most important diseases. The most common control method of this disease is application of fungicides. However, the adverse effects caused by repeated application of fungicides had led in recent years to the use of substances that stimulate plant defenses and have not environmental hazards. In this study, the effectiveness of two compounds, salicylic acid and riboflavin, have been evaluated for the control of sugar beet powdery mildew. Therefore, effects of different concentrations and different application times of these compounds were studied on disease severity in the greenhouse via experiments in factorial completely randomized design. The result showed the significant affectivity of these natural compounds to reduction of disease severity. Salicylic acid at a concentration of 20 mM and riboflavin at concentrations of 1 and 2 mM showed a high level control of disease and had no significant difference with the healthy plants (control treatment). There was no statistically significant difference between the effects of different application times.

**Keywords:** *Beta vulgaris*, salicylic acid, Riboflavin, Powdery mildew.

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