

## EFFECT OF SUGAR BEET VARIETIES, FUNGICIDE APPLICATION AND THEIR INTERACTION ON ROOT ROTTING, CORRECTED SUGAR YIELD

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Differences in performance among sugar beet varieties are caused by the combination of genotype and cultivation condition. Leaf spot disease caused by *Cercospora beticola* Sacc. is the most destructive foliar pathogen of sugar beet worldwide. In addition to reducing yield and quality of sugar beet, the control of leaf spot disease by extensive fungicide application incurs added costs to producers and repeatedly has selected for fungicide tolerant *Cercospora beticola* Sacc. strains.

The purpose of this paper is to determine the influence of the protection of the leaves and variety and their interaction on the root rot and white sugar yield. Experiments were carried on from 2015 to 2018, on the North part of Moldova, under the conditions of natural infection. The results are based on 15 trials, the study of 27 varieties with and without fungal leaf protection, seeds that were genetically monogerm, pelleted, with the same insecticide and fungicide treatment.

After long-term testing, are highlighted the different sensitivities and tolerances of the varieties to the protection of the leaves. Is demonstrated the positive effect on the production and rot indices following the fungal control of leaf diseases.

The conditions of the year demonstrate the major influence on the manifestation of diseases on the leaf, and respectively, the weight of the influence on the yield and rotting.

On average for the period of 4 years, the percentage contribution of fungicide on root production is 3.36%; and on the production of white sugar - 3.0%.

**Keywords:** *Beta vulgaris*, *Cercospora beticola* Sacc., leaves protection, sugar yield, environment.