

## *Annotation*

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### ***Assessment of cms hybrids of sugar beet on the tolerance to cercosporosis***

*The effectiveness of selection of most crops is determined by the increase of their implementation, improving quality and yield capacity of plants and the study of the biological and economic factors that contribute to the stability of agricultural production. Taking into consideration all these factors the selection of sugar beet under the program "Betainterkos" is aimed at increasing the yield capacity and sugar content of root crops, improving their shape, seed material, resistance and tolerance to biotic and abiotic environmental factors. One of the most significant factors that affect the yield capacity and sugar content of sugar beet, are diseases, particularly leaf spot.*

*The promising and reliable method of reducing the harmfulness of cercosporosis (the causative agent - the fungus *Cercospora beticola* Sacc.) is the use of disease tolerant varieties and hybrids. One of the methods of obtaining the resistant varieties or hybrids is the application of converged crossbreeding schemes involving sustainable pollinators and conducting the selection of the best breeding forms.*

*The creation of disease-resistant hybrids of sugar beet requires the identifying and obtaining sources of resistance to leaf spot during the growing season. To achieve this goal it is necessary to study various breeding material for resistance to diseases and to investigate the character of the inheritance of this trait.*

*In 2012-2014 24 CMS lines of Uman Research Plant-Breeding Station took part at program "Betainterkos", which were included into the hybridization of di- and tetraploid pollinators of various research institutions selection. For further breeding study the selection of only those hybrids was conducted that under the results of crop variety testing had the productivity higher than the group standard and characterized by high resistance to cercosporosis.*

*The best hybrid combinations, which significantly exceeded the group standard under the indicators of root crops yield capacity, sugar content, sugar collection and disease resistance were recommended to study at the state crop variety testing.*

***Key words:*** *sugar beet, CMS line, pollinator, hybrid, productivity, resistance.*