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AREAS FOR MAXIMUM YIELD FORMATION IN SUNFLOWER ON THE TERRITORY OF THE REPUBLIC OF MOLDOVA

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Similar as entire agricultural sector, sunflower crop is significantly affected by climate change. On the territory of the Republic of Moldova, besides sown areas and used agricultural technologies, the climatic factors also play an important role in harvest obtaining. In this study the degree of favorability of the country's territory for sunflower cultivation, depending on the distribution of air temperature and precipitation was analyzed. Based on the coefficients of correlation between the average yield and the temperature values in April-August, the precipitation in the cold season, as well as those during the growing period in 2003-2021, it was established that conditions in the north of the country are more favorable for sunflower crop than in the southern half.

From the point of view of the amounts of temperatures above the biological threshold (+7° C), but also of the temperatures in April-August, analyzed as an average for 2003-2021, in most of the territory of the Republic of Moldova the conditions are favorable for sunflower cultivation. It was found that in some years (2004, 2005, 2006) when values below 18°C are recorded, especially in the northern extremities (Briceni, Ocnita, Edinet, Donduseni, Soroca), the value of sunflower production is lower than in years with temperatures above this threshold.

Rainfall in the cold semester of the year, although insufficient throughout the country, registers higher deficits in the northern half, but the higher amounts of rainfall, which fall during the growing season, in this region, sometimes compensate for this deficit.

In the center of the country, rainfall during the growing season and average temperatures in April-August are optimal. However, the high degree of fragmentation of the relief in this region imposes certain restrictions on the areas occupied by arable land. Thus, the smaller harvest in Calarasi district can be explained. Even if the Cahul Plain and the Ialpug Depression, from a thermal point of view, correspond to the optimal necessary for sunflower cultivation, the pluviometric deficit at the level of the cold period of the year and vegetation determines restrictive conditions, this area being assigned – according to the proposed calculation methodology – the „less favorable" criterion.

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