

# THE BEHAVIOR OF SUNFLOWER HYBRIDS IN DIFFERENT ENVIRONMENTAL CONDITIONS IN ROMANIA

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## ABSTRACT

Sunflower breeders, working for a model (idiotype) of sunflower, must to know the main characteristics of the environment for which they are developing the hybrids, starting from soil type, potential growing season length, mean, minimum and maximum temperatures (per month) and the amount and distribution of rainfall, during the year. In the practical selection, which is part of the production of hybrids with high potential of productivity, as well as high adaptive potential, a strong influence belongs to the adaptive reactions to the ecological environment they are located in. The dry periods are more frequently, with negative effect on yield, including sunflower. We studied a set of 10 sunflower hybrids, in two years (2014 and 2105), in two locations, situated in different areas in Romania: Braila (eastern Romania and Fundulea (south Romania). The hybrids have been cultivated in three randomized replications. Comparing the two years, 2014 and 2015, regarding the air temperature and the amount of rainfall, in sunflower vegetation period generally, year 2015 was more dry, specially in Braila. The amount of rainfall was quite high, in Fundulea location, in 2014 year. Taking into consideration these data, the results regarding the seed yield for the ten hybrids, are showing that in Braila location it was registered a low seed yield comparing with Fundulea, in 2014 year. In 2015 year the highest seed yield was released by the hybrids, in Braila location. The hybrids Fundulea 708 and PR64LE20 had a good behavior, regarding the seed yield. The oil content, for all hybrids, was very good, in both years, in Braila location, the soil and climatic conditions in this location, being favorable for this characteristic. Regarding plant height, in both location and both years, the taller hybrids released the highest seed yield.

**Key Words :** sunflower, environmental conditions, hybrids, seed yield, oil content