



EFFECTS OF DROUGHT ON GROWTH STAGES IN SUNFLOWER HYBRIDS EFECTELE SECETEI PE ETAPE DE CREȘTERE LA HIBRIZII DE FLOAREA SOARELUI

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In 2003, in order to emphasize the way the drought has acted on sunflower growth and development, we have studied 20 long-term homologated hybrids, created at the Agricultural Development and Research Institute of Fundulea and Agricultural Development and Research Station of Podu-Iloaiei. Hydrological and pedological drought during the growth period had significant influence on sunflower growth and development, duration of phenological phase covering and, implicitly, on yield. The heliothermic index for the growth stage was of 5.1, ascertaining the dryness of year 2003. The sprouting ratio was between 70.2 % (HS-2521) and 88.1 % (HS-PI-2000). The growth rate was low, hybrids height being lower compared to normal years. The variation limits of this trait were between 102 cm (HS-PI-2000) and 147 cm (HS-2442). The stem diameter indicated a thin stem (1.5-3 cm) until the first anthesis and a strong stem at maturity (3-5 cm). The area of leaf limb has registered maximum values in early and semi-late hybrids, the average of the group being of 519.29 cm² and 528 cm², respectively. High temperatures resulted in early button formation, anthesis and physiological maturity; the growth period in most of hybrids was below 100 days. The values registered by hybrids for productivity elements certified the sunflower adaptability to long-term water and thermic stress. The sunflower yield was between 2738 kg/ha (HS-2521, early hybrid) and 4320 kg/ha (HS-2449, late hybrid created at the Institute of Fundulea). Compared to control, yield increases (1-16% for Performer, Minunea, Splendor, TOP-75, HS-PI-2001, HS-2527, HS-2442 and HS-2606) certified a higher yield capacity of hybrids and confirmed its stability under excessive drought. High self-fertility (25-59 %) in some hybrids ensured a greater stability to sunflower yield.