

VARIATIONS FOR BIOMASS AND ECONOMICAL YIELD AMONG SUNFLOWER CULTIVARS IN DIFFERENT GROWING SEASONS

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Sunflower area is increasing in Brazil. These areas are being cultivated for many purposes: oil yield, silage and forage for animal feeding, green manure. The performance of 11 genotypes were evaluated in 2 different growing seasons, in order to study the effect of genotype and environment on some physiological traits related to biomass and oil yield. The experiments were carried out under field conditions in the Experimental Centre of Campinas, in the dry and wet season of 1998-1999. The experimental design was a randomised block with four replications. As a rule, the genotypes performed better for grain and oil yield in the dry season crop, the only exception for Cargill 11. The above ground total dry matter (TDM) was equivalent in both seasons, except for AG910 and GV22510, which performed better in the dry season. The wet season crop produced higher plants, with higher stem dry matter (STM) but with less head (HDM) and leaves (LDM) dry matter yield. The relation SDM/TDM, at full flowering, ranged from 0.46 to 0.76, in the wet season, and from 0.25 to 0.58 in the dry season. The excess rain during the flowering period of AG910, Embrapa122 and M742, and the high *Alternaria* disease, were the possible causes for the lower oil yield in the wet season.

Key words: sunflower, biomass yield; genotypes; oil yield; grain yield

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