

Observations of head characteristics before and after physiological maturity, did not show any clear relationship between head colour and stage of development. The other indicator of physiological maturity was the generalized fall of the floral vestiges of the fruits, a characteristic that was first mentioned by Browne (1978).

The duration of the period between flowering and physiological maturity was little influenced by environmental conditions and there were no important differences between cultivars.

On the basis of this information it can be concluded that it is possible to forecast that the physiological maturity will occur approximately between 35 and 40 days after the generalized opening of the heads, adjusting then the time with greater precision by the signs of the beginning of the bract drying and the natural fall of the floral vestiges.

The number of days between physiological and commercial maturity varied between 8 and 30, the shortest period corresponding to one of temperatures higher than normal and the longest period corresponding to one with low temperatures and higher relative humidity.

Colabelli (1981), analysing the period from flowering to commercial maturity, found important differences among sowing times and among years, but no differences among cultivars of different maturity type. It can be thought, therefore, that if according to our information and to the available literature the period flowering-physiological ma-

turity is not very elastic, the variations found must correspond to the period physiological-commercial maturity. The environmental conditions are the determinant factors of the duration of the period of loss of moisture or senescence, there being no important differences among cultivars.

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EFFECT OF PHYSIOLOGICAL MATURATION ON QUANTITATIVE CHARACTERS OF SUNFLOWER VARIETIES AND HYBRIDS.

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ABSTRACT

The following physical and physiological characters of seed of sunflower hybrids and their parent lines were examined: 1000 seed weight, hectoliter weight, and husk percentage; germination energy and germability. The study, which included five hybrids, three cms lines, four restorers, and VNIIMK 8931 as the control, was conducted for three years in one locality.

Ten days after pollination, germination energy in VNIIMK 8931 ranged from 0 to 3.75% while the germability was 19.75%. The minimum 1000 seed weight was 13.9 gr (NS-H-25-RM), the maximum 30.4 gr (NS-H-28-RM). The minimum husk percentage was 42.7% (NS-H-63-RM), the maximum 76.6% (NS-H-25-RM). The minimum hectoliter weight was 15.05 kg (NS-H-25-RM), the maximum 24.46 kg (RHA-58).

Fifty days after pollination, the minimum germination energy was 81.75% (RHA-59), the maximum 99.25% (NS-H-63-RM). The highest germability was found in NS-H-63-RM: 99.25%. The minimum 1000 seed weight was 23.0 gr (RHA-58), the maximum 78.7 gr (NS-H-28-RM). The minimum husk percentage was 19.0% (NS-H-27-RM), the maximum 28.2% (RHA-58). The minimum hectoliter weight was 34.15 kg (RHA-18), the maximum 46.20 kg (cms-9).

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