IN VITRO POLLEN VIABILITY IN SOME WILD TYPE SUNFLOWER GENOTYPES (HELIANTHUS SPP)

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ABSTRACT

The evaluation of pollen viability is one of the essential criteria for pollinator's characterization. This study was carried out to understand the relationship between *in vitro* pollen viability and pollination and/or seed set in eight genotypes of wild type sunflower [(*Helianthus petiolaris* subsp. *petiolaris,* (1), (*H. petiolaris,* (1), *H. annuus* subsp. *lenticularis*, (1), *H. petiolaris* subsp. *petiolaris*, (1), *H. argophyllus*, (3), *H. maximiliani*, (1)] Two pollen viability tests, [TTC (2,3,5-triphenyl tetrazolium chloride), Asetocarmine] were used to estimate pollen viability. The data taken from three pollen characters (viable, semi viable, death) were analysed statistically by Jump statistical programme. Significant differences among genotypes, dies and interactions between genotypes and dies at 1% probability levels were found at all examined characters. The percentage of pollen viability varied from 48.6 to 99.1% by acetocarmine test and from 25.3 to 68.5% by TTC test. The highest pollen viability was obtained from diffent origin of *H. argophyllus* number 34 (% 79.53*)* and 35 genotypes (% 75.33) while *H. petiolaris* subsp. *petiolaris* had the lowest (%42.2). The acetocarmine had the highest pollen viability (83.3%) followed by TTC (%37.7). When the interactions examined acetocarmine died the wild sunflower pollens at 99.1%, TTC died the lowest rate of *H. petiolaris* pollens (%25.3). Among the wild type sunflowers studied *H. argophyllus* appeared to be suitable pollinators with respect to the criteria investigated.

Key Words : Wild type sunflower genotypes, pollen viability