

The Virulence of Broomrape (*Orobanche cumana* Wallr.) Populations on Sunflower in Some Regions of Northern Caucasus

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ABSTRACT

At virulence comparison of broomrape seeds collected on sunflower in Northern Caucasus in different years the populations Svetlogradskaya (Stavropol region, 2005) and Morozovskaya (Rostov region, 2006) were found as a high virulent for two resistant inbred lines of VNIIMK. The population Privolnenskaya (Krasnodar region, 2003) has shown the weakest virulence. Eight hybrids (different resistance against races A - E) were tested in field conditions against artificial infectious backgrounds of seeds from Svetlogradskaya and Privolnenskaya populations. The quantity of parasite stems appeared on the soil surface was counted. The sunflower variety Peresvet (VNIIMK) and a hybrid P 96 (resistant against race F in Spain) were tested at separate artificial inoculation by broomrape: race F (from Spain), the mixture of races F, G, H (from Turkey), also Svetlogradskaya and Privolnenskaya populations. The quantity of healthy tubercles was counted on sunflower roots after 30 days of growing. The all results confrontation let to make the conclusion: Svetlogradskaya and Privolnenskaya populations are represented by mixture of non virulent and virulent races for tested sunflower genotypes. But Svetlogradskaya contains a high percentage seeds of race F and insignificant admixture of the more virulent biotype. Privolnenskaya contains a high percentage seeds of race E and insignificant admixture of the more virulent biotype. The numerous tracks of died individuals of non virulent races were seen on roots of all experimental plants.

Key words: broomrape, virulence, races, sunflower