

The Use of New Rf Inbred Lines Originating From Interspecific Population with *H. deserticola* for the Production of Sunflower Hybrids Resistant to Broomrape

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ABSTRACT

One of the directions in sunflower breeding is selection for the resistance to broomrape. The population of broomrape has been stable in Serbia for a longer period of time, but the racial composition has changed in recent years, with race E being predominant in the regions of north Backa and Banat. Cultivated sunflower is genetically narrow and deficient in many desirable genes. Its genetic variability can be increased by the use of wild sunflower species and interspecific hybridization. The resistance of 15 new experimental hybrids to broomrape was tested on locations in Serbia (Pačir) during three years (2006, 2007, 2008) and in Romania (Baraganu, Bralia) during 2008. These hybrids were produced by crossing female inbred lines (Ha-26PR-A, PH-BC2-92-A and Ha-98-A) susceptible to broomrape and new Rf inbred lines (RHA-D-2, RHA-D-5, RHA-D-6, RHA-D-7, RHA-D-8), developed from interspecies population originating from *H. deserticola*, and resistant to broomrape race E. All examined hybrids were resistant to broomrape on both locations. Since broomrape race F is present on location in Romania, it is expected that the new Rf inbred lines-male components of examined hybrids, have the resistance gene for race F also.

Key words: sunflower, interspecific hybridization, resistance, broomrape