

Anther Culture Derived Progeny of Winter Wheat with Rye-Translocation

A. ŽOFAJOVÁ, S. MASÁR and M. UŽÍK

Research Institute of Plant Production, 921 01 Piestany, Slovakia, e-mail: zofajova@vurv.sk

Abstract: The growth and differentiation of tissue culture is strongly influenced by the genetic composition of the plant material from which the culture are derived. In wheat, several attempts have been devoted to define the location and nature of specific loci that may influence the tissue culture response. Of particular interest have been the rye translocations. In wheat, genes favouring regeneration ability are tightly linked to the 1BL/1RS rye translocation. Anther culture has become an increasingly important technique in many breeding programs. As the response of parental variety to anther culture influences the response of progeny, the set of winter wheat varieties and crossings were evaluated. Results showed a strong variability in responsiveness. This was probably due to the genetic background of the variety. The most successful crossings involved parental varieties Ilona, Astella and SK 656-2. At donor plants grown in field androgenic induction was higher than at plants from greenhouse.