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IDÉOTYPE SUD – IDEA AND APPROACH. FRANCE AND PORTUGAL COLLABORATES FOR THE CHARACTERIZATION OF WHEAT VARIETIES MORE TOLERANT TO WATER AND HEAT STRESS

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In order to progress on the characterization of wheat varieties more tolerant to climate change, which is already particularly sensitive in the Mediterranean climate, Arvalis - Institut du Végétal in France and the Portuguese Institute for Agrarian and Veterinary Research (INIAV) and the Portuguese cereal producers (ANPOC) in Portugal have developed a collaboration based on a original method, multidisciplinary (genetics, agronomy, ecophysiology) and with a multi-actors approach: farmers, researchers and field advisers. In order to save time, both on the study of wheat performance under different possible climate scenarios, and on assisting to progress to choose more tolerant bread and durum wheat varieties, a solid collaboration was started in 2011 between Arvalis Gréoux and the Portuguese Institute for Agrarian and Veterinary Research (INIAV), based at Elvas (wheat breeding team), with a common research programme called Ideotype Sud, to reinforce the effectiveness of this work.

This collaboration is based on a common remark and goal: the southern cereals producers see their yields stagnate or even regress. The chaotic climate frequently defeats their technical efforts. On one hand, an effort should be done to better use the possibilities of genetics to characterize the varieties' aptitudes and, on the other hand, to help producers to manage their crops according to the climate of the year, in Portugal and France.

Ideotype SUD takes the form of an identical trial comprising a selection of Portuguese and French/Italian bread and durum wheat varieties, tolerant or sensitive to water stress and heat stress, conducted in rain-fed and irrigated conditions, and followed on a common protocol including measures of yield components, stress indicators, and characterization of the environment. Therefore the stress scenario lived each year is well characterized, and these trials since 2011 allowed to scan many types of stressful climatic scenarios.

ABSTRACT