

SUNFLOWER VERTICILLIUM WILT: BEHAVIOUR OF COMMERCIAL HYBRIDS IN QUICK TESTS PERFORMED AT CONTROLLED CONDITIONS.

Verónica Elizabeth Crova ¹, Elena Clemente Gladys ¹, Mauricio Antonio Capurro ², Rita Szalay ³

¹ Unidad Integrada Balcarce (Fca Unmdp-Inta, Balcarce)

² Limagrain Argentina

³ Limagrain Europe

mauricio.capurro@limagrains.com

Introduction and objective. *Verticillium dahliae* is a major pathogen of many important crops. Verticillium sunflower wilt is an important disease in Argentina. The symptoms tend to be rather unreliable for assessing resistance under field condition, since the interaction with environment is often present. There is poor information about the behaviour of Argentinean sunflower hybrids in quick tests performed at controlled conditions. The objective of this work was to quantify the sunflower wilt incidence and severity of hybrids inoculated with two variants of *V. dahliae*.

Materials and methods. Eighteen commercial hybrids from Argentina were tested, including a susceptible and resistant control. Fourteen days old sunflower seedlings were inoculated by root immersion in a conidial suspension of *V. dahliae* (two isolates representative of Argentinean *V. dahliae* variants inoculated separately). Plants were planted in pots with a mixture of pasteurized soil and perlite and incubated in a growth chamber (12 h, photoperiod, 25 ± 2°C). Forty-five days from the inoculation, the severity and incidence of Verticillium wilt was recorded. The variance of data was analysed and means were compared by turkey test.

Results. The susceptible control had significantly higher *Verticillium wilt* severity and incidence than the resistant one (P<0.0001). The two isolates caused differential levels of disease severity and incidence to sunflower hybrids (P<0.0001). There was differential behaviour between hybrids in severity and incidence of Verticillium wilt.

Conclusion. The commercial sunflower hybrids show variability in their resistant level against *Verticillium wilt*. One hybrid show a good resistance level to both isolates

Discussion. This information adds knowledge to the breeding for resistance to sunflower *Verticillium wilt*.

Key Words : Sunflower; Verticillium Wilt; Commercial hybrids; Quick tests