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CURRENT STATUS OF DMI AND QOI FUNGICIDE RESISTANCE IN EUROPEAN UNION POPULATIONS OF *CERCOSPORA BETICOLA*

Etat actuel de la résistance aux fongicides DMI et Qoi dans les populations européennes de *Cercospora beticola* / Aktueller Status der Resistenz gegenüber DMI- und Qoi-Fungiziden in europäischen Populationen von *Cercospora beticola*

ABSTRACT

Resistance to both DMI and Qoi fungicides was first observed and reported in *Cercospora beticola* isolates from Italy collected in 2010. Resistance to DMI fungicides is present when EC₅₀ values of *C. beticola* radial growth is >1, and to Qoi fungicides when either the EC₅₀ values of *C. beticola* spore germination is >1, or the G143A mutation is present in the cytochrome oxidase b gene. Isolates of *C. beticola* were collected from eight additional countries and tested for resistance to the DMI fungicide tetraconazole and the Qoi fungicides pyraclostrobin and trifloxystrobin in 2012-2013. Fungicide resistance was present in *C. beticola* isolates from all countries that were sampled based on EC₅₀ values >1 and the presence of the G143A mutation, even in countries with limited *Cercospora* leaf spot and fungicide applications. The presence of resistance in multiple countries, including in countries where disease pressure is low and few fungicide applications are used, may suggest that seed produced in countries with widespread resistance may be the source of resistant isolates. Work is continuing to test this hypothesis.
