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Detection of Xanthomonas axonopodis pv. phaseoli and Xanthomonas axonopodis pv. phaseoli var. fuscans on Phaseolus vulgaris (bean)

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Auteur	Grimault, Valérie [1], Olivier, Valérie [2], Rolland, M. [3], Darrasse, Armelle [4], Jacques, Marie-Agnès [5]
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Résumé en anglais	This method is derived from the validation studies carried out by ISTA in 2003, in collaboration with the International Seed Health Initiative for Vegetables (ISHI-Veg) (Sheppard and Remeeus, 2005). For routine testing of bean seed a combination of two complementary semi-selective media, MT and XCP1, is recommended with a pathogenicity test to confirm suspect isolates. In 2010 in the USA and France conflicting data were obtained with the new ISTA method. Research in France (GEVES and INRA) and in the Netherlands (Naktuinbouw) showed that some isolates that were responsible for positive results were causing symptoms in the pathogenicity assay but were not identified as Xap based on molecular methods (genetic bacterial fingerprinting in the Netherlands and pathogen specific PCR's in France). Therefore it was concluded that the pathogenicity assay used in the ISTA method, a crucial step in the Xap test, is not reliable enough. A new pathogenicity assay was developed at INRA to allow a reliable characterization of the aggressiveness of X. axonopodis pv. phaseoli wild type strains and mutants (Darsonval et al., 2009). A comparison study of the new pathogenicity test and primers specific for X. axonopodis pv. phaseoli fuscans and non fuscans isolates (Audy et al.,1994; Boureau et al., 2012) was carried out as a collaboration between ISTA, ANSES, INRA and ISHI-Veg. This study showed that the new pathogenicity test and Audy et al, (1994) primers were good confirmation tools and that Diaggene (Boureau et al., 2012) primers gave good results but their use did not improve sensitivity of the method.
URL de la notice	http://okina.univ-angers.fr/publications/ua7946 [6]
Lien vers le document	https://www.seedtest.org/upload/cms/user/SH-07-021-2014.pdf [7]

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