



Niches and routes of transmission of *Xanthomonas citri* pv. *fuscans* to bean seeds

Submitted by Matthieu Barret on Tue, 06/04/2019 - 17:23

Titre	Niches and routes of transmission of <i>Xanthomonas citri</i> pv. <i>fuscans</i> to bean seeds
Type de publication	Article de revue
Auteur	Darrasse, Armelle [1], Barret, Matthieu [2], Cesbron, Sophie [3], Compant, Stéphane [4], Jacques, Marie-Agnès [5]
Editeur	Springer
Type	Article scientifique dans une revue à comité de lecture
Année	2018
Langue	Anglais
Date	Janvier 2018
Numéro	1-2
Pagination	115-128
Volume	422
Titre de la revue	Plant and Soil
ISSN	0032-079X
Mots-clés	Common bacterial blight [6], CSLM [7], Dope-fish [8], Seed transmission [9]
Résumé en anglais	<p>Aims Seeds are vectors of a diversified microbiota including plant pathogens. To better understand transmission of common bacterial blight (CBB) agents to bean seeds, we analyzed the role of non-pathogenic xanthomonads on seed transmission efficiency and investigated the location of <i>Xanthomonas citri</i> pv. <i>fuscans</i> (Xcf) into seeds and plantlets.</p> <p>Methods Competition between CBB and NP strains was initially assessed in vitro and then extended in planta to monitor the impact of co-inoculation on Xcf seed transmission. Moreover, location of Xcf strains in seeds and seedlings was visualized using a combination of gfp-tagged strain and DOPE-FISH/CSLM.</p> <p>Results Whereas CBB agent growth was inhibited in vitro by some seed-borne non-pathogenic xanthomonads strains, these strains did not transmit efficiently to seed through floral pathway and did not affect Xcf seed transmission. Xcf cells were observed entering seed through vascular elements and parenchyma of funiculus, but also micropyle and testa. Xcf cells were observed, moreover, among other bacteria on radicle surfaces, especially tip, in cotyledons, and plumules.</p> <p>Conclusions CBB agents are more efficient than non-pathogenic xanthomonads in using the floral route to colonize seeds. CBB agents are located within different niches in the seed tissues up to the embryonic axis.</p>
URL de la notice	http://okina.univ-angers.fr/publications/ua19705 [10]
DOI	10.1007/s11104-017-3329-3 [11]

Lien vers le document <https://link.springer.com/article/10.1007%2Fs11104-017-3329-3> [12]
Titre abrégé Plant Soil

Liens

- [1] <http://okina.univ-angers.fr/a.darrasse/publications>
- [2] <http://okina.univ-angers.fr/matthieu.barret/publications>
- [3] <http://okina.univ-angers.fr/sophie.cesbron/publications>
- [4] <http://okina.univ-angers.fr/publications?f%5Bauthor%5D=28321>
- [5] <http://okina.univ-angers.fr/m.jacques/publications>
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- [11] <http://dx.doi.org/10.1007/s11104-017-3329-3>
- [12] <https://link.springer.com/article/10.1007%2Fs11104-017-3329-3>

Publié sur *Okina* (<http://okina.univ-angers.fr>)