Dynamics of compost microbiota during the cultivation of *Agaricus bisporus* in the presence of *Bacillus velezensis* QST713 as biocontrol agent against *Trichoderma aggressivum*

Caroline Pandin, Régis Védie, Thierry Rousseau, Dominique Le Coq, Stéphane Aymerich, Romain Briandet

PII: S1049-9644(18)30537-1
DOI: https://doi.org/10.1016/j.biocontrol.2018.08.022
Reference: YBCON 3838

To appear in: *Biological Control*

Received Date: 31 July 2018
Accepted Date: 25 August 2018

Please cite this article as: Pandin, C., Védie, R., Rousseau, T., Le Coq, D., Aymerich, S., Briandet, R., Dynamics of compost microbiota during the cultivation of *Agaricus bisporus* in the presence of *Bacillus velezensis* QST713 as biocontrol agent against *Trichoderma aggressivum*, *Biological Control* (2018), doi: https://doi.org/10.1016/j.biocontrol.2018.08.022

Dynamics of compost microbiota during the cultivation of *Agaricus bisporus* in the presence of *Bacillus velezensis* QST713 as biocontrol agent against *Trichoderma aggressivum.*

Running title: Impact of strain QST713 on *Agaricus* compost microbiota

Caroline Pandin[a], Régis Védie[c], Thierry Rousseau[c], Dominique Le Coq[a,b], Stéphane Aymerich[a], and Romain Briandet[a,#]

[a]Micalis Institute, INRA, AgroParisTech, Université Paris-Saclay, 78350 Jouy-en-Josas, France.

[b]Micalis Institute, INRA, AgroParisTech, CNRS, Université Paris-Saclay, 78350 Jouy-en-Josas, France.

[c]Centre Technique du Champignon, Distré, France.

Corresponding author; romain.briandet@.inra.fr

ABSTRACT

The edible button mushroom *Agaricus bisporus* is cultivated worldwide and appreciated for its organoleptic and nutritive qualities. It is nowadays cultivated at industrial scale in climatic units under controlled environmental conditions. Various organisms can trigger microbiological-induced losses, including *Trichoderma aggressivum* f. *europaeum*, the fungal agent of green-mould disease, which hinders the growth of *A. bisporus* mycelium. In France, the biocontrol agent *Bacillus velezensis* QST713 is used to control *T. aggressivum* and prevent production losses. Here, we evaluated the impact of *B. velezensis* QST713 on the