



Key facts about the regulated  
bacterium *Curtobacterium*  
*flaccumfaciens* pv.  
*flaccumfaciens*

PATHOGEN OF LEGUME CROPS







# Regulated pathogen

01

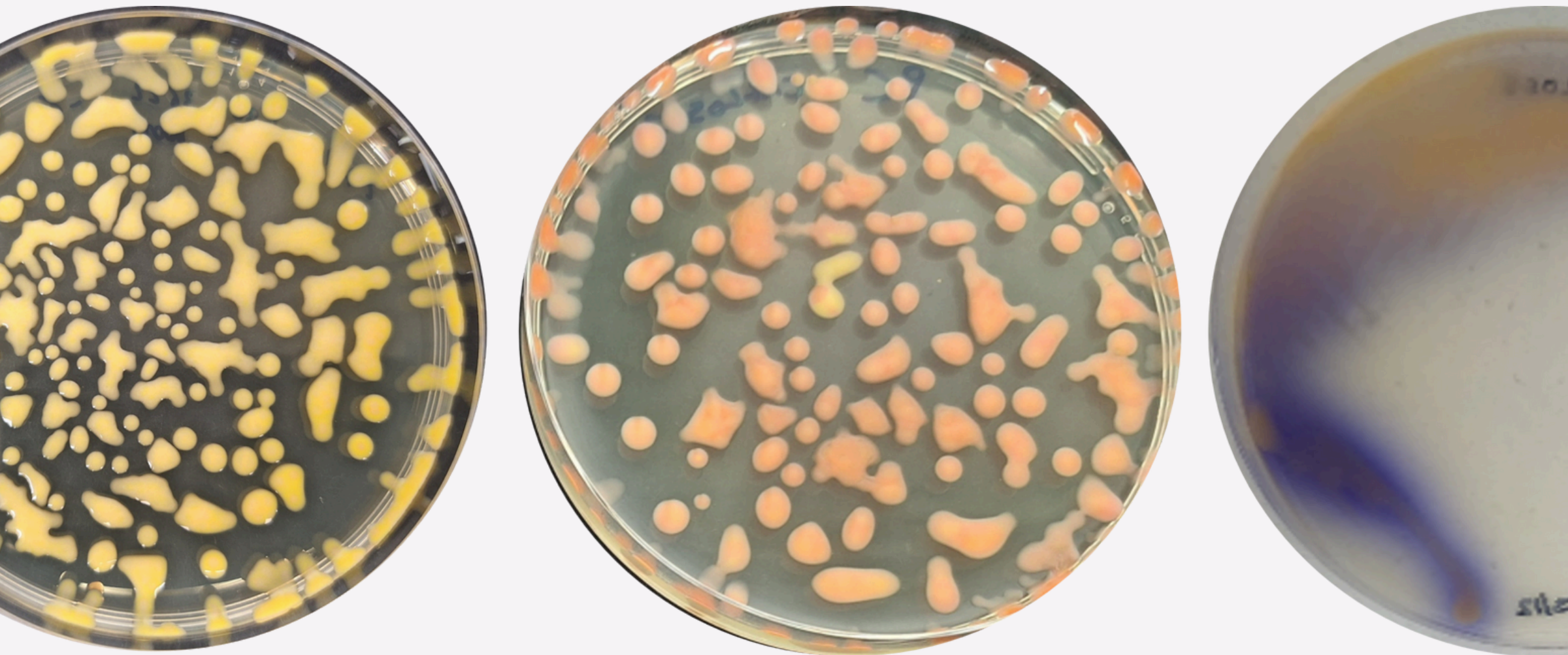
The '**EU Plant Health Law**' aims to protect European crops, trees and wild plants by controlling certain pests and diseases already present in the EU (so-called 'regulated non-quarantine pests'). Furthermore, it provides measures to prevent the entry and spread of new harmful organisms ('**quarantine pests**').

Since 2019, ***Curtobacterium flaccumfaciens* pv. *flaccumfaciens***, Cff in short, has been listed as a quarantine bacterium for the entire EU territory and is therefore subject to strict controls by the legal authorities.



# Multicoloured bacterium

02



*Curtobacterium* is a rod-shaped bacterium that is found in almost every natural ecosystem on earth, but mostly on plants and in soil. Cff, the *Curtobacterium* covered in this brochure, is only known as a **pathogen of legumes (Fabaceae)** and in particular of *Phaseolus* beans, where it causes bacterial wilt disease.

Cff is referred to as the multicoloured bacterium because of the presence of **five different colony colour variants** on culture media, i.e., yellow, orange, salmon, purple, and red.





# Disease symptoms & transmission

03

The word flaccumfaciens is derived from the Latin '**flaccus**' (flabby or flaccid) and '**faciens**' (making). This describes the typical symptoms caused by Cff, i.e. **flaccidity** starting at the leaf margins and progressing to **wilting** of the entire leaf and plant. Very often, irregular peripheral and interveinal necrotic leaf patches surrounded by wavy yellow borders are also seen ('**firing**').

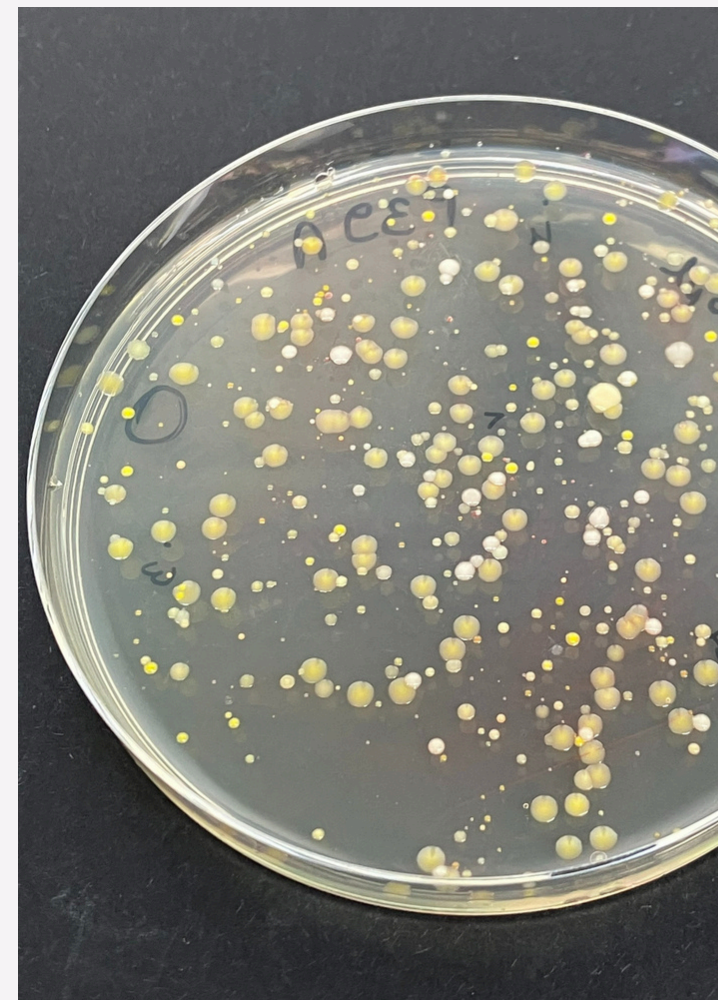
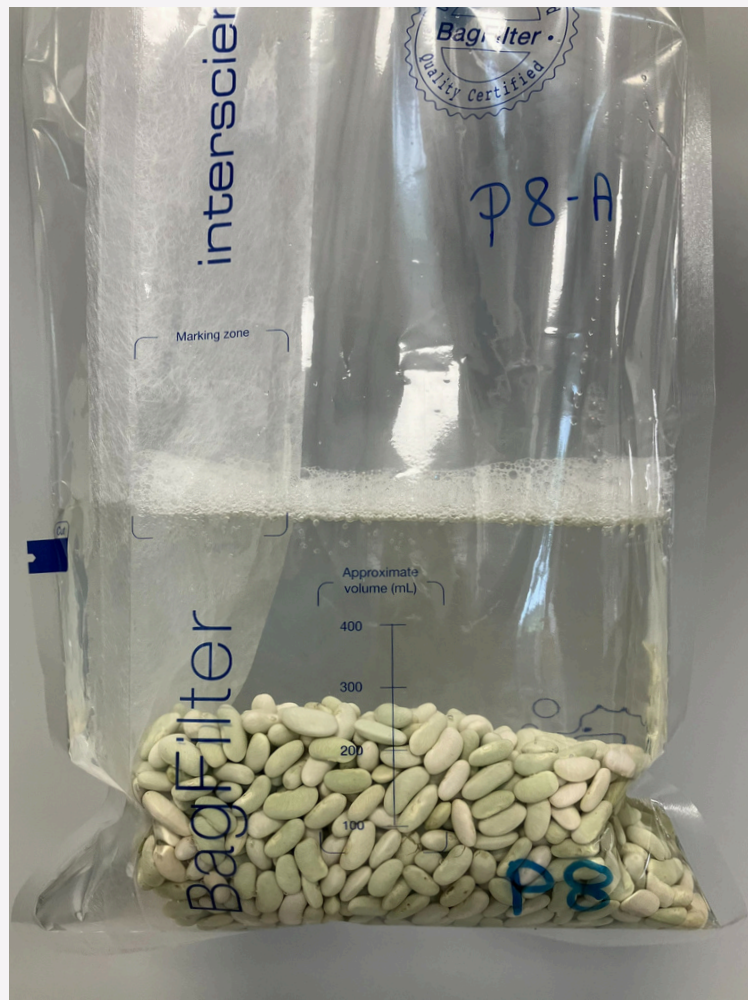
Cff spreads through the **vascular system** of its host plant which can lead to the **infection of seeds**. Plant-to-plant transmission occurs via contact and water (overhead irrigation!).





# Seed health

04



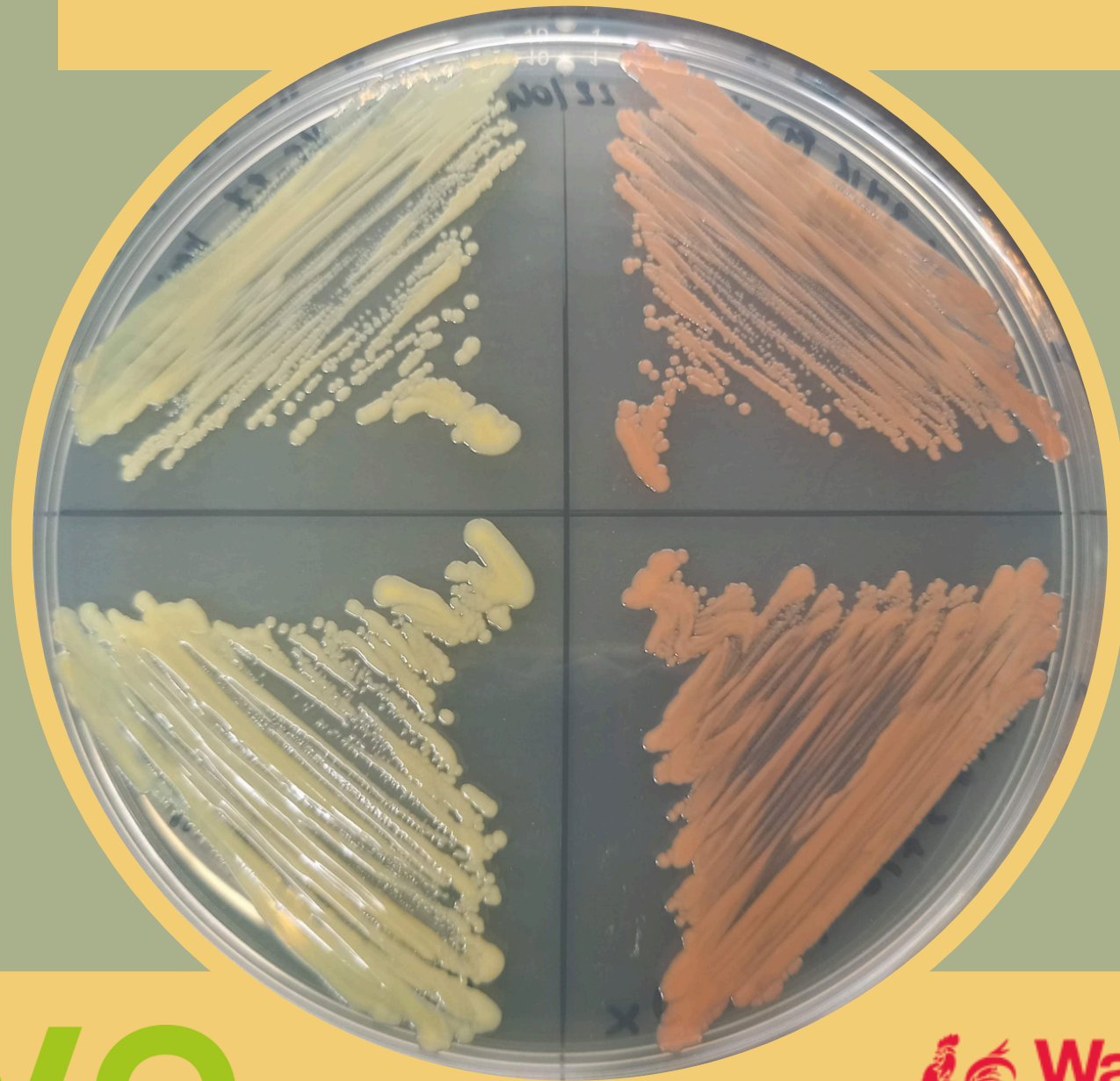
Contaminated seed constitutes the primary pathway for the introduction of Cff. Therefore, **seed health monitoring** is the main focus of phytosanitary inspection.

Cff can be detected in seed by a **standard laboratory method** which involves testing 5,000 seeds in subsets of 1,000 using dilution plating of the seed extract on culture media with PCR follow-up for identification of bacterial colonies. In parallel, seed extracts are also tested directly in real-time PCR.

If Cff is detected, the national plant protection organization is notified and will start **trace back and forward investigations**.



# More information



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<https://pureportal.ilvo.be/nl/projects> >> CurtoALERT  
<https://www.cra.wallonie.be/fr/curtoalert>  
<https://www.ilvodiagnosecentrumvoorplanten.be/nl/nieuws>