

COMPANY NAME

CITROSOL PRODUCTS

**CHALLENGE SHEET****CHALLENGE CODE**

17.1 CITROSOL

TITLE

Alternative solutions for post-harvest rot control that are residue-free and completely eliminate the use of water in their application.

DESCRIPTION

Water is a scarce and increasingly limited resource. Saving water at all points along the value chain is a fundamental objective in the agricultural sector. Currently, the vast majority of post-harvest treatments for the curative control of rot in fruits and vegetables are applied using water-based methods and/or leave residues of synthetic pesticides on the produce. Additionally, when the application method involves water, waste water is generated from these treatments, which contains these pesticides, posing an environmental problem if not managed properly. To control rot in the post-harvest stage of fruits and vegetables, extending their shelf life, while also saving water and achieving a more natural product, the goal is to define/develop solutions that prevent the growth of post-harvest fungi without using water and without leaving residues of synthetic pesticides on the produce.

HOW COULD WE

Obtain a post-harvest rot control solution that is as universal as possible (effective against any pathogen-fruit pair), with efficacy equivalent to that of current treatments with chemically synthesized fungicides. This solution should be based on technologies that do not require the use of water in their application and do not leave pesticide residues on the fruit.

SELECTION CRITERIA

Equivalent effectiveness to synthetic fungicides. Curative effectiveness with a permissible delay of a minimum of 18 hours between infection and treatment. Preventive effectiveness would be a plus. Universal effectiveness
Ease of industrial application
Absence of residues on the fruit
Cost
TRL (Technology Readiness Level) of the solution

TARGET INDICATORS

Effectiveness in controlling rot against the main pathogen-fruit pairs of interest in post-harvest (to be validated in trials conducted by Citrosol, both on a pilot scale and an industrial scale).
Permissible delay
Product cost
Cost of the application system and/or consumables
Residues on the fruit

REQUIREMENTS

Low hazard and/or toxicity of the solution, as well as any potential consumables it may require, for the application operator.

CHALLENGE TYPOLOGY

Process

✓ Technology

Business

✓ Product

KEYWORDS

Control of postharvest decay, water savings, residue-free treatments.