

# Resistance to fungicides in mushroom cultivation

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## The problem

The limited active ingredients available to fight biotic disorders in mushroom crops, together with an inadequate management of the approved formulations, facilitate the outbreak of harmful resistant pathogens in the mushroom industry.

## The solution

Specific biostimulant solutions with antifungal activity for mushroom pathogens, like the one developed by BIOSCHAMP. Biostimulation in the cultivation of *Agaricus bisporus* will reduce yield losses caused by mycoparasites.

## Benefits

1. A decrease in the dependency on fungicides of chemical origin.
2. Prevention of resistant strains while extending the useful life of the authorized active ingredients.
3. Reduction of the environmental impact of the cultivated mushroom sector.



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## Practical recommendations

Key measurements should prevent disease outbreaks through good cultural practices. To select the most suitable control mechanisms:

- Use biological control methods.
- Do not use preventive phytosanitary treatments during cultivation in the absence of pathogens.
- Identify risk thresholds that allow the application of effective treatments.
- Do not use phytosanitary products in case of low disease incidence.
- Use selective phytosanitary products for the disease detected.
- Whenever possible, alternate between products with different mechanisms of action.
- Follow the application dose indicated by the manufacturer in the label.



### About BIOSCHAMP and this practice abstract

This practice abstract was elaborated in the **BIOSCHAMP project**, based on the EIP AGRI practice abstract format. © 2022

**Project duration:** from October 2020 to March 2024.

**Goal:** develop an integrated approach to tackle the mushroom cultivation challenges, improving the mushroom sector industrial profitability while reducing the agronomical need for pesticides by 90 %.