

Popular scientific project description for project funded by Ekhagastiftelsen

Popular scientific project description is to be submitted within 2 months of project grant.

Application number:	2025-87
Project title:	BIOPULS: Unveiling the biocontrol potential of <i>Aureobasidium pullulans</i> for the sustainable management of grey mould in strawberry
Receiver of grant (name, address):	Mudassir Iqbal Sveriges lantbruksuniversitet Department of Plant Protection Biology Box 190 234 22 Lomma
Contact / project manager:	mudassir.iqbal @slu.se
Project start (yyyy-mm-dd): *	2026-04-01
Project end (yyyy-mm-dd): *	2028-03-31
By Ekhagastiftelsen granted sum:	950 000 SEK

Project description: (200 - 300 words)

Grey mould is one of the most serious diseases affecting strawberries and many other horticultural crops. It is caused by the fungus *Botrytis cinerea* and can destroy large parts of the harvest, reduce fruit quality, and lead to major food waste. In Sweden, strawberry growers can lose up to 80% of their yield in severe outbreak years. Climate change is expected to worsen the situation, as warmer temperatures and wetter summers create ideal conditions for the disease. Today, grey mould is mainly controlled using chemical fungicides. However, these chemicals are becoming less effective as the pathogen develops resistance, and their use raises concerns about environmental impact, human health, and biodiversity. At the same time, European policies such as the EU Farm-to-Fork strategy aim to reduce pesticide use by 50% by 2030 and support a transition toward more sustainable food systems. This creates an urgent need for reliable, nature-based alternatives that work in practice.

This project focuses on biological control by using the beneficial fungus *Aureobasidium pullulans*, a naturally occurring and harmless organism that lives on strawberries. Some strains of this fungus are very effective at suppressing grey mould, while others are not. Understanding why this difference exists is key to making biological control more reliable for farmers. By studying and comparing approximately 150 strains collected from diverse geographic locations across Europe, the project will identify the most effective ones and explain why some strains are particularly efficient at controlling grey mould. The long-term goal is to provide strawberry growers with safe, organic-compatible tools that reduce dependence on chemical fungicides, protect yields, and support resilient, environmentally friendly farming, fully in line with EU policy goals and the Ekhaga Foundation's commitment to sustainable agriculture and healthy food.

* Dates for project start and end should be the dates for which the grant is received (Not dates for total project if longer than period for which grant is received)