

**Topic/Title (Norwegian)**

**Topic/Title (English)**

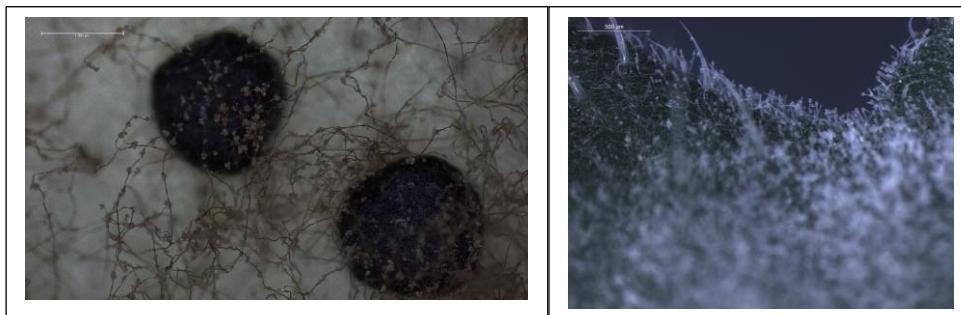
Possibilities for two to three **master level** thesis at 60 credits.

Potential induction of systemic resistance for biotic stress caused by powdery mildew and gray mold.

Exploration of host plant genetic resources for enhanced optical performance

Optical environment on development and conidiation behaviour of *Botrytis cinerea*

**Picture**



**Fig.** Gray mold and powdery mildew.

**Summary** (Describe the topic/thesis, type of thesis work: field work, laboratory work, literature study)

Powdery mildew and gray mold are two most important fungal diseases in horticulture industry, can cause significant losses if not properly managed. Even though fungicides play key role, management of these diseases with environmentally friendly alternatives are crucial. With the ongoing research projects, students can learn interactions among plant-fungal-optical radiation, and possible options of optical based management of these diseases. Experiments will be conducted at controlled environment greenhouses and growth chambers in combination with laboratory work. Students will be trained on i) inoculation of plants with fungi, ii) staining, assessment, and imaging of fungal developmental stages, iii) Gene expression and iv) data analysis, thesis writing and scientific publication.

**Subject area** (keywords)

Powdery mildew; gray mold; optical radiation; host resistance, gene expression, biosynthesis

**Language thesis:** English

**Thesis:** Master thesis

**Credits:** 60 credits

**Project/company:** Ongoing research projects at BIOVIT, NMBU.

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