

Topic/Title (Norwegian)

Vekstavslutning i potet

Topic/Title (English)

Desiccation in potatoes

Picture



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

The potato production in Norway is threatened by a lack of good haulm killing methods since Reglone (diquat) no longer can be used. Desiccation of the potato haulm before harvest is an important IPM measure to avoid late blight (*Phytophthora infestans*) infection on the potato tubers and rotting in storage. Desiccation will also stop the growth and regulate the size of the tubers, induce tuber maturation, promote skin set, facilitate the release of the tubers from the haulm and facilitate harvesting. Currently, only one chemical desiccant is approved (Spotlight Plus, active ingredient carfentrazone-ethyl), but it is not permitted to use after mechanical flailing. One application of this agent is often not enough to kill the potato haulm. Another desiccant (Gozai or Mizuki, both with active ingredient pyraflufen-ethyl) has been approved for emergency derogation in 2020, 2021, 2022 and 2023. Mechanical flailing is now widely used followed by another measure. There is a great need in the potato production to find better potato haulm killing solutions in potatoes. In the "SOLUTIONS" project, which runs until 2024 with funding from FFL/JA, Grofondet and industry partners, we are researching new alternative haulm killing methods such as hot water, flaming, alternative chemical desiccants, mechanical methods and comparing it with chemical methods. Student thesis topics can be, for example:

- How does the alternative desiccants in project SOLUTIONS affect spores of late blight? Test growth of e.g. 10 different late blight isolates in vitro ("microtiter plates") where different concentrations of chemical desiccants. Studies of both effects on direct germination of



Bachelor or Master thesis BIOVIT 2023/24

sporanges and on zoospores. Will be done in collaboration with project partners and supervisors in NIBIO.

The project is a collaboration between the Norwegian Institute for Bioeconomy Research (NIBIO), the Norwegian Agricultural Extension Service (NLR) and relevant industry partners in Norway.

Subject area (keywords)

Desiccation, potato, precision farming, bioherbicides, mechanical treatments, thermal treatments, late blight

Language thesis (Norwegian and/or English)

Norwegian or English

Bachelor or Master thesis

Master

Credits

30 or 60 points

Project period

2021-2024

Project/company

«SOLUTIONS: New solutions for potato canopy desiccation, control of weeds and runners in field strawberries and weed control in apple orchards» management of creeping perennial weeds” coordinated by NIBIO.

Please contact

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