Possible masterthesis BIOVIT 2022/23:

Title:

Effect of different types of soil tillage on type and amounts of weeds in autumn cereals in Norway.

Summary:

Climate change increase possibilities to produce autumn cereals in Norway which have a higher yield potential and spring varieties. Higher yields per area are an important measure to increase cereal production in Norway. Climate change will also lead to wetter conditions and effective strategies are needed to explore workable conditions to the best possible degree. Soil tillage is costly and there is a huge potential to reduce tillage intensity. In the project 'ProHøst' field trials were established (Ås, Romerike og Apelsvoll) which (among others) contain different dates for seeding (early and late September) and different established (ploughing, reduced soil tillage, direct drilling) and 'new' tillage methods (strip-till). Read more about these trials (in Norwegian): https://kornforum.nlr.no/nyhetsarkiv/korn/2021/etablering-av-hostkorn; https://www.norsklandbruk.no/aktuelt/plantekultur/flere-kan-produsere-hostkorn/; https://www.youtube.com/watch?v=Xjo6fOMq4cA&t=312s

Earlier studies show that one of the main limitations for succeeding with reduced soil tillage is weeds and that there is an urgent need for efficient strategies to cope with weeds. Also, the first results from 'ProHøst' show that weeds are challenging but that there is a huge variation between tillage methods.

The task will contain (a) a literature study to gain a general overview over the correlation between different types of tillage and amount/ types of weeds in Norway, (b) registration of weeds in one or several field trials and (c) determine the effect of the registered weeds on yields.

Keywords: Autumn cereals, reduced tillage, weeds, weed registration, yield effect

Type arbeid: Literature study, field work and data analysis

Masterthesis & credits: 60 ETS

Language: Norwegian or English

Project/ company: NIBIO, department of grain and forage seed agronomy, existing field trials in ProHøst

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