

Short introduction of HiMa project

”Maximizing carbon sequestration in sugar beet crop rotations in Finland”

Time 1.4.2021- 30.9.2023



The purpose of the project is to improve the carbon balance of sugar beet soils from both a climate and plant productivity perspective.

WP 1. Crop rotation

- Diverse crop rotation has a good impact on soil carbon content. However so far crop rotation of Finnish sugar beet fields has not been as comprehensive as it could be. Therefore, the purpose of the project is to:
 - Clear up the current situation of the rotation density and the common crops in sugar beet rotations
 - Test the effects of two 7-year crop rotation sites on soil condition and sugar beet yield stability
 - Understand the decomposition process of sugar beet residues
 - Measure greenhouse gases from sugar beet canopy
- Results will be used to advise the growers with their crop rotations
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WP 2. Pilot farms

- The collaboration with farms which are using strip tillage or direct drill on sugar beet farming.
 - To find best possible cover crops for strip tillage system
 - Determine the carbon absorption of the cover crops
- Results will be used to encourage the sugar beet farmer to try out the cover crops



WP 3. Winter cereals in sugar beet crop rotation

- Late sugar beet harvesting is a challenging task for winter cereal sowing. Therefore, it has been very unusual that winter cereals are part of sugar beet crop rotation. However, demand of over wintering crops has increased by Finnish government.
 - Methods for late winter cereal sowing in sugar beet fields are tested

