

ILMATIETEEN LAITOS METEOROLOGISKA INSTITUTET FINNISH METEOROLOGICAL INSTITUTE

The multi-disciplinary research of Carbon Action

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9.3.2021 Carbon Action Science Seminar



BALTIC SEA ACTION GROUP

CARBON CARBON ACTION

CLIMATE - SOIL - BALTIC SEA - BIODIVERSITY

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FARMERS

Through carbon farming, farmers have the power to turn climate change around. Over a hundred carbon farmers are currently testing different farming methods on their fields throughout Finland. The farmers contribute with their own expertise and work closely with researchers and agricultural advisors.

SCIENCE

In Carbon Action, world-class researchers look for ways to both store carbon permanently in the soil and verify the changes in carbon storage scientifically. Soil and microbial analyses, atmospheric measurements and modeling are used to study the fluxes and sequestration of carbon in test fields.

BUSINESSES

Corporate participation is essential to the mainstreaming of carbon sequestration in farmland and achieving the ambitious goals of Carbon Action. The Carbon Action business platform enables information exchange and mutual learning among researchers and businesses.

Carbon Action Research

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CREDITING SOIL CARBON SEQUESTRATION

Carbon credits, economics, policies

Farmers, documentation, communication, verification

Soil analyses Carbon isotopes Microbiology analyses Emission measurements New technologies Spatial variability Remote sensing Carbon fluxes

Soil carbon cycle, hotspots

Intensive study plots

LUITURAL PRACTICES Design best means of soil carbon sequestration CED NMTHEMATICAL MODELLING WASSO ETC.) A ADVAN Bioch-DIL PROCESSES **Organic** amendments **Mic**robiology Cover plants **Boosters** No-till

Study farms

Carbon farms

Applies to levels A to D and beyond

TWINWIN – biodiversity-soil-carbon experiment in Helsinki

TWINWIN funding: Nessling Foundation. Photo credit: Jussi Heinonsalo

Carbon Action Farmers

- 108 farms, of which 20 in Field Observatory
- Carbon farming experiment 3 ha
 - 1.5 ha carbon farming practice
 - 1.5 ha business-as-usual
- Carbon budget estimated using soil samples and a calculator
- Carbon Action Club now about 500 members



Alta



A carbon farming experiment

Farmer and photo: Juuso Joona, Tyynelä farm, Finland, October 2018

Verification system of carbon sequestration and regenerative farming impacts



GHG inventories Carbon markets Carbon footprints



CARBON ACTION

ONLINE FIELD DATA CARBON SEQUESTRATION

DATA AND TEST SITES CARBON FARMING CARBON ACTION PLATFORM

PRACTICES

ABOUT



QVIDJA

Intensive Site

Qvidja is clay soil for silage grass production. Species diversity is high and the overall aim is to improve soil quality. Qvidja is one of the intensive study sites.

FARMING METHODS

Management: ley farming Species: silage grass Soil type: clay loam

SATELLITE IMAGES





CO, FLUX





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Carbon Action Projects





THH TIINA JA ANTTI HERLININ SÄÄTIÖ

