



SoilCare

SOILCARE FOR PROFITABLE AND SUSTAINABLE
CROP PRODUCTION IN EUROPE

Policy analysis:
PROMOTING SICs
ADOPTION IN
VIBORG, DENMARK

SOIL HEALTH RELATED PROBLEMS ON SITE



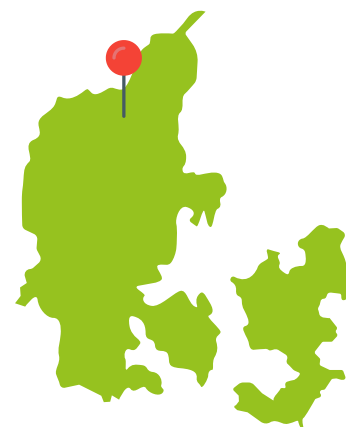
Erosion



Loss of organic
matter



Compaction



SOIL-IMPROVING CROPPING SYSTEMS FOR INCREASING SOIL HEALTH IN VIBORG

The following Soil-Improving Cropping systems (SICs) were tested in Viborg, Denmark, to address the main soil threats identified above:

1. **Introduction of soil improving crops (CROPSYS crop rotations, screening of different types of catch crops)**
2. **Soil cultivation measures (different soil tillage intensities)**
3. **Fertilisation/soil amendments (different levels of fertilisation and liming)**

The SICs above present important practices that might benefit soil health if widely taken up. The main aim of this study was to formulate policy alternatives and actions and to facilitate the adoption of SICs.

Evidence gathered through desk research, interviews and a stakeholder workshop show that different factors contribute to and undermine the uptake of SICs in general, and of the practices tested in Viborg, Denmark, in particular. These include:

- Costs of transitioning to new cropping systems
- Prioritisation of short-term financial benefits
- Lack of policy coherence
- Reluctance to abandon traditional practices
- Lack of continued learning and integration of emerging knowledge in practices



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The SoilCare project is funded by the European Union's Horizon 2020 research and innovation programme under grant agreement No. 677407.



POLICY SHORTCOMINGS AND OPPORTUNITIES FOR FACILITATING THE UPTAKE OF SICS

SICS adoption is already promoted through a range of existing regulatory, economic, and voluntary policy instruments and measures in Viborg, Denmark. The analysis shows that several policies regulate and incentivise the use of crop rotation, cover crops, reduced tillage, and integrated nutrient: CAP cross-compliance standards, greening requirements as well as RDP measures incentivise the uptake of crop rotations/crop sequencing, reduced tillage methods, and to a lesser extent, cover crops. However, provision included in the Act on Agricultural Use of Fertilisers and on Plant Cover has the potential to increase the adoption of cover crops. Nutrient input from agriculture is regulated through several pieces of water legislation, mostly with a view to protecting water quality rather than soil. Policies such as the Act on Agricultural Use of Fertilisers and on Plant Cover define limitation for fertiliser use in certain areas, mandate the establishment of buffer strips, and establish rules for the use of plant cover/catch crops.

Blue circles= SICS tested in the study site; Red circles = Other SICS promoted through existing mandatory, economic, or voluntary policy instruments in Viborg, Denmark

	CROP ROTATION	COVER CROPS, CATCH CROPS, GREEN MANURES,	INTEGRATED NUTRIENT MANAGEMENT	EFFICIENT IRRIGATION	CONTROLLED DRAINAGE	REDUCED/NO TILLAGE	INTEGRATED PEST MANAGEMENT	SMART WEED CONTROL	SMART RESIDUE MANAGEMENT	CONTROLLED TRAFFICKING	INTEGRATED LANDSCAPE MANAGEMENT
CAP GAEC cross compliance standards (Bekendtgørelse om krydsoverensstemmelseBEK)	●		●			●					●
CAP Greening requirements	●	●				●					●
Rural Development Programme 2014-2020 (Det danske landdistriktsprogram 2014-2020)	●					●	●				●
Act on Agricultural Use of Fertilizers and on Plant Cover (Bekendtgørelse af lov om jordbrugets anvendelse af gødning og om plantedække)		●	●								
Agreement on Food and Agriculture Package 2015 (Aftale om fødevarer- og landbrugspakken 2015)	●		●								●
Act on Tax on Pesticides (Bekendtgørelse af lov om afgift af bekæmpelsesmidler)							●				
Act on Management of Agricultural Land (Bekendtgørelse af lov om drift af landbrugsjorder)							●				●
The Livestock Manure Order (Husdyrgødningsbekendtgørelsen)			●								



Based on the results of this study, the following policy recommendations can be made:

SUBSIDISE TRANSITION
TO PRACTICES
BENEFITING SOIL HEALTH



ADDITIONAL SEEDS AND
MACHINERY PURCHASE
MACHINERY EXCHANGE

Subsidise transition to practices benefitting soil health:

The cost of transition to more sustainable practices is identified as an important barrier for the farmers. Forced to choose between short term and long-term gains, farmers often have no real motivation to forego their immediate revenues. The uptake of certain SICS, such as reduced tillage or cover crops might require upfront investments, such as the purchasing of additional seeds and new machinery. Grants should be made available to farmers buying new equipment to implement these practices or groups of farmers intending to set up a 'machinery exchange'. Such an exchange could also be set up and managed by the regional/local farm advisory services or municipalities.

INCREASE POLICY
COHERENCE



POLICY CONFLICTS
AND SYNERGIES
CAREFULLY ANALYSED
AND ALIGNED

Increase policy coherence:

Policy conflicts and synergies need to be carefully analysed and aligned, in order not to discourage the transition to sustainable farming practices. Ultimately, this might require a prioritisation of certain objectives and targets (and operationalised by the right policy interventions) as a certain level of conflict is unavoidable to ensure the right balance between environmental, social, and economic sustainability. On a practical level, it is important for farmers to have clear, unambiguous information on the legal conditions they need to comply with – especially if they are tied to subsidies - and those that may be rewarded.

OFFER REGULAR TRAINING AND
INFORMATION SERVICES TO
KEEP FARMERS INFORMED
ABOUT NEW DEVELOPMENTS
AND INSIGHTS



SOIL TO BE HIGHLY
FEATURED ON THE
CURRICULUM FOR
FARMERS TRAINING

Offer regular training and information services to keep farmers informed about new developments and insights:

Dissemination of knowledge, awareness raising, and education are important components of policy interventions and they should be used in parallel with economic and legislative instruments. Regular training, informative sessions on latest innovations are preferred to one off training sessions which have limited impact. Some of the practices benefitting soil will require farmers to learn about these techniques, their application to different conditions as well as their benefits to change their misconceptions about these methods. To this end, research findings should be made accessible and widely disseminated and educational activities should be encouraged. Knowledge should be disseminated via multiple channels, through the provision of guidance document but also farms visits and demonstration days. Workshops, encouraging peer to peer learning, and long-term experiments that will show the benefits of SICS are promising initiatives that can be supported.



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