



SoilCare

SOILCARE FOR PROFITABLE AND SUSTAINABLE
CROP PRODUCTION IN EUROPE

Policy analysis:
PROMOTING SICs
ADOPTION IN
PRAGUE, CZECH
REPUBLIC

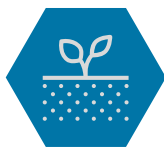
SOIL HEALTH RELATED PROBLEMS ON SITE



Soil
compaction



Low soil
organic
matter



Deterioration
of soil
structure



Soil
erosion



SOIL-IMPROVING CROPPING SYSTEMS FOR INCREASING SOIL HEALTH IN PRAGUE, CZECH REPUBLIC

FACTORS AFFECTING THE UPTAKE OF SICS

The main soil threats in region where the study site Prague - Ruzyne, Czech Republic is located include soil compaction, loss and limited input of soil organic matter (SOM), deterioration of soil structure, and erosion. Soil-improving Cropping Systems (SICS) that are being tested within the context of the SoilCare project include:

Evidence indicates that there are several factors that shape the success or failure of policy instruments in the study site region, and the uptake of SICS tested in the sites in general. These factors include:

1. **Application of manure**
2. **Use of catch crops and growing of legumes**

In addition, several long-term experiments (LTE) with various tillage methods (conventional, reduced and no tillage), as well as different fertiliser applications and organic farming methods are being carried out in the study site. Crop rotation systems are also used, which include the use of legumes and other soil improving crops.

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.

1. **The Regulatory framework is perceived as complex and excessive by farmers:** Stakeholders emphasised that SICS were regulated by multiple laws, including the Water Act. Rules were perceived as quite complex and difficult to understand for many farmers. It was pointed out that it was unclear to farmers how to interpret some of the rules and the conditions they are supposed to meet.
2. **Weak/incorrect enforcement of policy measures:** A complex regulatory framework hampers compliance and thus limits the achievement of the positive impacts intended by the various policy instruments. Weak enforcement of these policies limits their impacts on the ground. In this context, it was mentioned that sometimes individual inspectors lack understanding of the funding requirements, e.g. in the case of the CAP, and stakeholders report that this has led to an unjustified reduction of subsidies in some cases.
3. **Cost of modern machinery for soil-improving cultivation methods:** Stakeholders identified the costs of purchasing new equipment and technology as financial factors impeding the wider uptake of certain SICS, such as reduced tillage tested in the study site.
4. **Existing non-governmental bodies have the potential of facilitating change:** There are already a number of non-governmental bodies, such as the Czech Agrarian Chamber, dedicated to the issue of agricultural policy and farming, which could support the transition to more sustainable agricultural practices, e.g. through educational offers to farmers.



Authors

Alicia McNeill, Melanie

Muro, Tugce Tugran, Zuzana Lukacova, Charlotte-Anne Chivers

Contributors

Dr. Pavel Čermák, Ing. Helena Kusá, Crop Research Institute, Prague, the Czech Republic

 @SoilCare_eu



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POLICY SHORTCOMINGS AND OPPORTUNITIES FOR FACILITATING THE UPTAKE OF SICS

The table below provides an overview of policies promoting the full range of SICS covered by the SoilCare project and the SICS (including the LTE) tested at the study site. The analysis shows that all of the identified policies regulate and incentivise the SICS trialled to some degree.

The use of crop rotation, green manure, and reduced tillage practices are incentivised through CAP GAEC Cross-compliance Standards, greening payments and are further specified by the national Anti-Water Erosion Measures Guidance. CAP cross-compliance establishes nutrient management requirements for farmers receiving direct payments. In addition, water policies place limitations on fertiliser use in certain areas.

Red circles = SICS uptake promoted through existing mandatory, economic, or voluntary policy instruments in Prague, Czech Republic. Blue circles = SICS uptake promoted as part of the wider SoilCare project.

	CROP ROTATION	GREEN MANURES, COVER CROPS, CATCH CROPS	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	●		●			●					●
CAP greening payment requirements	●	●									●
Cross-compliance (anti-water erosion measures guidance)	●	●				●			●		
Act on fertiliser usage			●								
Water Act	●		●								
Ordinance Concerning the Establishment of Vulnerable Zones and Action Plan	●		●								●
Waste Act			●								



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

REVIEW, ADAPT, AND EFFECTIVELY COMMUNICATE POLICY REQUIREMENTS



IMPROVE POLICY MONITORING AND ENFORCEMENT

Review, and if needed, adapt and effectively communicate policy requirements: Highly complex legislation and possibly a lack of policy coherence mean that the existing regulations do not inspire adoption. In addition, compliance with regulation in the study site region is seen as being burdensome rather than rewarding, which is an additional barrier to adoption. Farmers struggle to interpret and comply with rules.

Improve policy monitoring and enforcement: while it was found that there are a number of policies already in place that (directly and indirectly) regulate and incentivise different SICS, stakeholders report that outcomes on soil health are limited due to weak enforcement mechanisms. It is clear mechanisms for checking compliance with existing regulations need to be strengthened and expanded. Regulatory instruments need to be monitored and effective sanctions put in place for non-compliance in order to be successful in prompting adoption. This needs to include the training of farm inspectors who, like farmers, need to understand the regulatory requirements and their practical implementation.

OFFER REGULAR TRAINING AND INFORMATION



ENGAGE WITH FARMERS AND TRUSTED ORGANISATIONS TO DELIVER ADVICE AND 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.

Engage with farmers and trusted organisations to deliver advice and training: peer to peer learning and bottom-up initiatives are powerful tools to deliver knowledge to farmers as they play a great degree of trust in their fellow producers. Partnering with farmers willing to pioneer new techniques or trusted organisations, such as the Czech Agrarian Chamber, will ensure that target audiences are reached, and new information is heard.

SUBSIDISE TRANSITION TO SUSTAINABLE PRACTICES



The uptake of certain SICS, such as reduced tillage, 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.

