

SUMMARY

The SoilCare project has tested and evaluated the concept of Soil Improving Cropping Systems (SICS) to increase sustainability and profitability. The premise behind the SICS concept is that there are cropping systems that improve soil quality and at the same time have positive impacts on profitability and sustainability.

SICS are composed of three elements: long crop rotations, soil improving crops and agronomic management techniques. Here we set out how policy can improve the adoption of SICS and how institutional, economic, socio-cultural and knowledge / education factors affect the uptake of these practices.



Soil-improving lupin crops



Organic amendments



Diverse species

POLICY OPTIONS

Actions to regulate, incentivise & promote SICS adoption:

- 🌱 Develop specific targets for soil threats & integrate into Soil Thematic Strategy and other new policies
- 🌱 Promote SICS through relevant policies e.g. EU-level advice on Eco Schemes & Commission recommendations for Member States
- 🌱 Realign where policy conflicts arise to avoid discouraging transition to sustainable soil management
- 🌱 Create a clear, robust, and reliable monitoring & enforcement system for the CAP
- 🌱 Create greater consumer awareness of sustainable produce through education

**Create
consistent
farm advice and
policy instruments
for sustainable soil
management**

Socio-cultural factors

Society's awareness and valuing of soil -

Multiple sites: consumers need to better understand the impacts production methods had on soil for more informed purchasing decisions and increase their willingness to pay prices reflecting the costs of sustainable production

New generation of farmers open to change -

ES/BE/NO: habit makes many farmers reluctant to change practices; older farmers stuck in production-orientated habits

BE: there are always pioneers or innovators who want to try out new practices

Economic factors

High investment and/or implementation costs -

Multiple sites: change of practices involves high (short and long-term) costs for e.g., organic fertiliser, equipping machinery with the right tools (e.g., crawlers, disc harrows), purchase of new crops as well as additional seeds on top of main crop for cover crops

Holistic approaches and co-benefits to soil -

UK: changes in arable rotations due to weed and disease control have now been mainstreamed and have co-incidentally benefited the soil

Market pressures/demands -

BE: policy encourages farmers to plant cover crops and rotate crops but because of the high demand for potatoes and the consequent profitability, too many potatoes are grown; in addition, crop residues and organic materials are used for biofuels and other bio-products due to a high demand for these products instead of being returned to the soil



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Institutional/policy factors

Adverse effects of policy design -

BE: perception that policies dictate practices that need to be adopted, regardless of feasibility/practicability, sometimes resulting in adverse behaviour, e.g., converting existing grassland to avoid the “permanent grassland” status.

UK: farmer could be asked to plant a certain type of mix to favour bees and birds, and which does not provide a good soil cover

Lack of coherence between legislation/conflicting objectives -

UK: targets and subsidies for increasing woodland areas for growing bio-fuel crops fail to specify that the land must be suitable for these purposes

BE: Due to the fragmentation in different public services and departments, farmers often get contradictory advice (Nitrates Directive versus CAP)

Knowledge and education

Insufficient resources -

Multiple sites: Advisory services need more resources for experimental and demonstration farms. Advice providers are often reliant on project funding which has continuity problems

Adviser expertise and quality -

ES: The quality of advice is very heterogeneous, and is given on an ad hoc basis without continuity

BE: physical and biological soil management is often neglected due to a focus on nutrients and fertilisers/manures

NO: quality of advice from NLR (independent membership organisation) is good, knowledgeable people who know a lot about soil and try to incorporate advice to enhance soil and environmental conditions when they can



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Insights into factors affecting SICS uptake

As illustrated in the table above, there are a wide range of issues affecting sustainable soil management. Following on from this, the country-specific issues stem from fundamental EU-level factors below:

Socio-cultural Factors

A lack of awareness of soil in society and its framing as a resource to be exploited for humankind and economy engenders a disconnect between publics and impacts of agricultural production on soil. Further, mechanisation creates distance between farmers, their fields and soil, making it difficult for them to see ecosystem changes. Some SoilCare stakeholders stressed ethical convictions favouring ecological approaches to farming as an important force for change with respect to these issues.

Economic Factors

A financially difficult transition period from conventional to organic or more sustainable soil management practices can prove too risky for many farmers to take, as yields can reduce during this period. They therefore need funding to support them through this. Further, financial incentives from policy and public demand can motivate a change in practice. Global trade systems favouring monocultures also inhibit change, as power is accumulated in the retailers, rather than the producers.

Institutional / Policy Factors

Change via regulation was thought by SoilCare stakeholders to be both positive & negative, e.g. the examples on the previous page. Possible inadvertent effects can be avoided by closely working with farmers. Currently, advisory services are seen as a tool for safeguarding business as usual, and do not reflect scientific evidence for sustainable soil management. Regular training is needed for both farmers and advisors. Publics education and accessibility of sustainably produced food also needs prioritising.



Checking soil quality and health



Understanding soil health needs

Promoting SICS through policy

This policy brief has outlined the factors affecting adoption of SICS at both EU and Member State level. In order to better promote, incentivise and regulate the implementation of SICS across the EU, all factors need to be understood and addressed. A holistic approach to both society and the farming sector is needed to ensure sustainable soil management, from an appreciation by consumers of the costs and basic practices (such as organic) of food production, to advice, support and training for farmers.

The full report from which this policy brief has been created can be accessed here (D7.2 Report on the selection of good policy alternatives at EU and study site level): <https://www.soilcare-project.eu/resources/deliverables>



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