



# SoilCare

SOILCARE FOR PROFITABLE AND SUSTAINABLE  
CROP PRODUCTION IN EUROPE

Policy analysis:  
PROMOTING SICs  
ADOPTION IN  
FLANDERS, BELGIUM

## SOIL HEALTH RELATED PROBLEMS ON SITE



Compaction



Erosion



Acidification



Nutrient loss



## SOIL-IMPROVING CROPPING SYSTEMS FOR INCREASING SOIL HEALTH IN FLANDERS

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

1. **Integrated nutrient managements (Organic soil amendments in wheat fields),**
2. **Reduced tillage: Strip till and soil cover in maize ("Grass undersowing in maize"),**
3. **Demonstration fields (Soil improving crops, controlled traffic management).**

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 Flanders, Belgium in particular. These include:

- "Fitness" and complexity of policies
- Limited coherence of policies
- Lack of financial incentives
- Timeframe of policies:
- Limited soil education/knowledge dissemination

## COVER CROPS FOR COMPACTION ALLEVIATION AND TO IMPROVE SOIL QUALITY

### Factors encouraging the adoption of cover crops:

- Erosion prevention
- Prevention of soil compaction
- Deletion of contractor crop

### Barriers preventing the adoption of cover crops:

- Lower yield in some conditions
- Increased need for pesticides
- Need for new machinery

### Factors encouraging the adoption of integrated nutrient management:

- Sufficient supply of woodchips
- Cooperative purchase of machinery
- Awareness and knowledge of advantages
- Possibility of management agreements

### Barriers preventing the adoption of integrated nutrient management:

- Sufficient supply of woodchips
- Costs of implementation
- Inconsistencies in the legislation
- Insufficient knowledge about the advantages

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# 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 the Flemish part of Belgium. The analysis shows that that several policies address the SICS that were tested in the study site: cover crops and reduced tillage are incentivised under the Common Agricultural Policy's (CAP) cross-compliance standards and the greening measures, respectively. Integrated nutrient management is to a great extent regulated by the Nitrates Directive and the Manure Decree, but also influenced by greening requirements under the CAP which incentivises the use of nitrogen-fixing crops and crops with lower fertilization demands.

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

	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 (Randvoorwaarden Norm voor een goede landbouw- en milieucoditie van grond (GLMC))	●	●			●	●			●		●
CCAP Greening Payment Requirements (Vergroeningspremie: vergroening in het kader van het Gemeenschappelijk Landbouwbeleid)		●	●			●	●				●
CCAP Agro-environmental measures (Agromilieumaatregelen)		●				●		●	●		●
Management Agreements (Flemish Land Agency) (Beheerovereenkomsten (VLM))					●						●
CAP RDP (Programma voor Plattelandsontwikkeling (derde))	●										
Decree on Integrated Water Management (Decreet betreffende het integraal waterbeleid)					●						
Manure Decree - Action Programme for the Implementation of the Nitrate Directive 5th Manure Action Plan (Mestdecreet - Actieprogramma ter uitvoering van de Nitraatrichtlijn 2015-2018 (het 5de Mestactieplan))		●	●								
National Action Plan (NAPAN - National Actie Plan d'Action National)							●				
Decree on the Sustainable Use of Pesticides and Associated Decisions (Decreet duurzaam gebruik van pesticiden en de bijhorende besluiten)							●				
Decision of the Flemish Government on Erosion Control (Besluit van de Vlaamse Regering betreffende de erosiebestrijding)					●	●					●



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

INCREASE POLICY COHERENCE AND ADAPT CURRENT LEGISLATION



SOIL-SPECIFIC AND REWARDING REGULATIONS

REWARD FARMERS FOR THE BENEFITS THEY DELIVER TO SOCIETY



INTRODUCE BETTER DESIGNED ECONOMIC INSTRUMENTS

ENCOURAGE WIDE-SPREAD VOLUNTARY PRACTICES



GRASS-ROOTS VOLUNTARY MECHANISMS (FARMERS CO-OPS)

ESTABLISH MECHANISMS FOR EFFECTIVE KNOWLEDGE DISSEMINATION AND EXCHANGE



AWARENESS RAISING EXCHANGE OF PRACTICES GUIDANCE

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## Support awareness-raising and dissemination of good practices:

The role of education and knowledge dissemination cannot be underestimated. In the Flanders case study, several farmers were adopting SICS or other beneficial practices only to “pass a test” or gain a subsidy. This means that the adoption of SICS is very precarious – if the subsidy was to be discontinued or a specific monitoring requirement changed, farmers would likely revert back to old practices. Similarly, when adoption practices do not go as planned and are subsequently deemed a failure, the causes need to be systematically investigated and documented to shape future initiatives. Similarly, successes need to be disseminated as good practice. By investing in education and knowledge dissemination, the adoption of SICS becomes much more sustainable. In Flanders, there are organisations such as the B3W (Advisory Service to improve Soil and Water Quality), established in January 2021. This service includes all practical research stations in Flanders, the Soil Service of Belgium and ILVO (Flanders Research Institute for Agriculture, Fisheries and Food). This service will focus on a limited number of topics linked to soil and water quality. It offers three services: individual coaching, focus groups and thematic exchange events. This study did not uncover any evidence of conflicting messages or over-information, however, in general, care should be taken to ensure farmers are met with a consistent message, based on scientific evidence, which is presented without being overwhelming and confusing.



INCREASE POLICY  
COHERENCE AND  
ADAPT CURRENT  
LEGISLATION



SOIL-SPECIFIC  
AND REWARDING  
REGULATIONS

## **Increase policy coherence and adapt current legislation:**

Most policies affecting soil quality in Flanders are regulatory instruments, and there is evidence that these can be improved. Highly complex legislation and a lack of policy coherence mean that the existing regulations do not inspire adoption. In addition, regulation in Flanders is seen as being punishing rather than rewarding, which is an additional barrier to adoption. There is also evidence to suggest that having general regulations (rather than soil-specific regulations) have a limited impact – the Sustainable Use of Pesticides Directive has affected the types of pesticides available but has done little to improve the soil quality.

ENCOURAGE  
WIDE-SPREAD  
VOLUNTARY  
PRACTICES



GRASS-ROOTS  
VOLUNTARY  
MECHANISMS  
(FARMERS CO-OPS)

## **Better explore ways of encouraging voluntary practices:**

There was little evidence of wide-spread grass-roots volunteer mechanisms (such as farmers' cooperatives), however, it is clear that certain voluntary measures, such as reducing tillage, are already being implemented. While our research was not able to confirm that these practices were adopted because of a specific voluntary measure, it does show that farmers in Flanders are willing to adopt voluntary measures, and perhaps more can be done to encourage them.

REWARD FARMERS  
FOR THE BENEFITS  
THEY DELIVER TO  
SOCIETY



INTRODUCE  
BETTER  
DESIGNED  
ECONOMIC  
INSTRUMENTS

## **Introduce better designed economic incentives to counter costs associated with SICS:**

Economic instruments are primarily found within CAP. There is, however, potential to further develop economic instruments in Flanders, as one of the key barriers to adoption are the costs – whether they are direct costs (such as investing in new machinery) or opportunities costs (such as foregoing revenue from potatoes or biomass).

