



SoilCare

SOILCARE FOR PROFITABLE AND SUSTAINABLE CROP PRODUCTION IN EUROPE

Policy analysis:
PROMOTING SICs
ADOPTION IN THE
ENGLISH EAST
MIDLANDS

SOIL HEALTH RELATED PROBLEMS ON SITE



Compaction



Low soil organic matter



Blackgrass



SOIL-IMPROVING CROPPING SYSTEMS FOR INCREASING SOIL HEALTH AT LODDINGTON

The following Soil-Improving Cropping systems (SICs) were tested in Loddington, East Midlands, England, to address the main soil threats identified above:

1. **Introducing deep-rooting grass cultivars into the rotation**
2. **Compaction alleviation through sub-soiling and mycorrhizal inoculation**

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 several factors affect SICs uptake. These include:

- Lack of soil-specific policies
- Extent of farmer input to policymaking
- Limited coherence between policy instruments
- Lack of monitoring and enforcement
- High adoption costs
- Limited flexibility of financial instruments
- Pressure from market demands
- Lack of education and training

COMPACTION ALLEVIATION EXPERIMENT

Factors encouraging the adoption of subsoiling and mycorrhizal inoculation:

- Subsoiling is a well-known and accepted agronomic practice

Barriers preventing the adoption of subsoiling and mycorrhizal inoculation:

- Limited knowledge of costs/benefits
- Not applicable to shallow/stony soils
- Lack of knowledge surrounding the practical application of the inoculant
- Lack of equipment availability for subsoiling

DEEP-ROOTING GRASS CULTIVARS EXPERIMENT

Factors encouraging the adoption of grass leys in the rotation:

- Simple to implement with existing practices
- May help with blackgrass control

Barriers preventing the adoption of grass leys in the rotation:

- Limited knowledge about costs/benefits
- Lack of awareness about financial support
- Lack of legislation protecting the soil
- Lack of knowledge about soil
- Crops grown in unsuitable places due to market demand
- Lack of monitoring of funding schemes
- May not be attractive to wholly arable farmers
- Conflict with the goal of increasing food supply (cereal yields may decline at catchment scale)
- 5-year rule for permanent pastures
- Countryside Stewardship prevents conservation of forage

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POLICY SHORTCOMINGS AND OPPORTUNITIES FOR FACILITATING THE UPTAKE OF SICS

The table below indicates that SICs adoption is already promoted through a range of existing regulatory, economic, and voluntary policy instruments and measures in the English East Midlands. The analysis shows that several policies address the SICs that were tested in the study site: the incorporation of grass leys into arable rotations is incentivised under the CAP's cross-compliance standards as well as the Rural Development Programme for England 2014 - 2020, although deep-rooting cultivars are not specifically supported. Reduced or no tillage is encouraged by some policies, but mandatory requirements or economic incentives are not established by any of the policies analysed.

Red circles = SICs uptake promoted through existing mandatory, economic, or voluntary policy instruments in the English East Midlands

	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	●	●	●			●			●	●	
The Guide to Cross-compliance in England 2017	●	●	●			●			●	●	
CAP Rural Development Programme 2014-2020	●	●									
Countryside Stewardship	●	●							●		●
Organic Regulation		●	●			●	●		●	●	
Nitrate Pollution Prevention Regulations			●								
Plant protection Product Regulations							●				
Pesticides Control Legislation							●				
Championing the Farmed Environment		●				●					
Water Environment Regulations			●	●	●		●				●
Sludge regulations			●								



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



CONSIDER DEVELOPING A DEDICATED SOIL POLICY



INCREASE POLICY COHERENCE

Consider the development of a dedicated soil policy: legislation focusing on soil is needed for a more concrete impact on farmers and the adoption of SICs. Such an intervention should be designed to accommodate farm diversity, featuring a robust monitoring and enforcement system. The 25-year Environmental Plan provides an important step in the right direction, but appropriate management approaches, instruments, and metrics are needed. In addition, while the CAP's Statutory Management Requirements will be preserved in English law following Brexit, a similar mechanism to preserve the aims of the Good Agricultural and Environmental Conditions is needed..

Increase policy coherence: some of the SICs might not align with existing policy objectives (e.g. yield reduction vs. increasing food production). By the same token, some policy objectives foster unsustainable agricultural practices. 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.



REWARD FARMERS
FOR THE BENEFITS
THEY DELIVER TO
SOCIETY



MAKE
ECONOMIC
INSTRUMENTS
MORE FLEXIBLE

Make economic instruments more flexible to provide tailored support to farmers

transitioning to sustainable practices: financial instruments should allow long-term change in practices rather than finance one off interventions. They should be designed in a way that offers integral solutions to farmers, for instance they should cover costs associated with machinery or other investments associated with change, which are important barriers for farmers.

Reward farmers for benefits delivered to society (and discourage unsustainable practices):

make funding available for public benefits delivered to compensate for a potential reduction in yield. At the same time, soil-improving cropping systems should be encouraged to counter market forces which pressure farmers into unsustainable production and an overexploitation of their natural resources.

ENGAGE WITH FARMERS
AND TRUSTED
ORGANISATIONS TO
DELIVER
ADVICE/TRAINING



OFFER REGULAR
TRAINING AND
INFORMATION

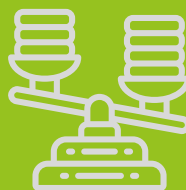
Offer regular training and information services to keep farmers informed about new

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 Campaign for the Farmed Environment (CFE), will ensure that target audiences are reached, and new information is heard.

DEMONSTRATE THE
COSTS AND BENEFITS
OF NEW PRACTICES



The advantages and disadvantages of the soil-improving cropping systems trialled at the study site were poorly understood by farmers. They should be widely communicated, and ideally demonstrated with field visits, to farmers in the region, by the advisory services, farmers with first-hand experience with these techniques, and other organisations trusted by the farming community.



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