



SOIL HEALTH RELATED PROBLEMS ON SITE



Low soil organic matter



Soil compaction



SOIL-IMPROVING CROPPING SYSTEMS FOR INCREASING SOIL HEALTH IN VENETO, ITALY

The soil-improving cropping systems (SICS) tested at the SoilCare study site in Veneto, Italy include:

1. Cover crops
2. Reduced tillage

These practices can address loss of soil-organic matter and soil compaction, the main soil threats found at the study site. These practices, therefore, represent important practices that might benefit soil health in the region if widely taken up.

Evidence gathered through interviews, desk research and a stakeholder workshop found several factors that contribute to and undermine the uptake of SICS. Some of the findings suggest that the uptake of SICSs is increasing. On the other hand, barriers to the uptake of these practices remain.

The key factors shaping the success of policy instruments include:

- Limited influx of young farmers prevents change
- Established practices increase need for inputs and heavy machinery
- Lack of a clear vision in policy for sustainable farming
- Complex policies which focus on short-term solutions
- Translation of national policies at regional level creates different outcomes
- No-tillage management and weed control without glyphosate

DESCRIPTION OF THE CASE STUDY SITE

Location: Legnaro, Veneto

Climate: Mediterranean North pedo-climatic zone. Sub-humid, with average annual rainfall of 850 mm

Main soil threats: Loss of organic matter (SOM) in mineral soils causing GHG emissions and worsening of soil functions and soil compaction

Current practices: Conventional, different crop rotation, mouldboard ploughing, chemical weed and pest control.



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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 policy instruments in the Veneto region of Italy. The analysis shows that several policies regulate and incentivize the use of cover crops and reduced tillage. Cover crops are incentivised through GAEC 4 of the CAPs cross-compliance standards, particularly on land showing signs of erosion. However, cover cropping is not included in the list of EFA options available to Italian farmers. In addition, area-based payments under the RDP may also be used to incentivise the use of cover crops as well as reduced tillage, the second SICS practice tested at the site. Water policies are also relevant for tillage management in the study site area, which is located in the Nitrate Vulnerable Zone of the Veneto Region. The Veneto Region has recently implemented a specific agro-environmental measure to increase soil organic matter content through organic amendment input and conservative tillage.

Red circles = SICs uptake promoted through existing mandatory, economic, or voluntary policy instruments in Veneto, Italy. Blue circles = SICs covered by 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 Rural Development Programme 2014-2020			●				●				●
CAP Rural Development Programme 2014-2020 for the Veneto region			●				●				●
River Basin Management Plan for the Eastern Alps			●	●	●		●				●
Regional Regulation of the agronomic use of livestock manure	●	●	●			●					●
Nitrate Directive	●	●	●			●					●
Directive on the Sustainable use of Pesticides			●				●				
Ministerial Decree on the correct use of Plant Protection Products			●				●				



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

DEVELOP HORIZONTAL, LONG TERM STRATEGIES FOR SUSTAINABLE AGRICULTURE



A strategic vision which goes beyond the regional differences and short-term political interest has great potential in facilitating a transition to sustainable agriculture and thus better soil management practices. In the same vein, policies should strive to be more holistic. The European Farm to Fork Strategy already could provide a starting point for developing such a vision.

FLEXIBLE BUT WELL-INFORMED POLICY DESIGN



Italy has a great diversity of regions and farming systems, each with their own problems. Policy should take these differences into account so that they do not undermine the successful implementation or lead to success only in the areas which are already progressive. The policy must be based on the identification of problems and designing solutions based on scientific input.

IMPROVE FARMERS' CONNECTIONS WITH RESEARCH RESULTS

There is a need for a stronger link between research results on one hand and farming community on the other. Farmers confirmed their need for independent and objective advice and information on SICs. Researchers and technical experts underlined the need for an on-field demonstration activities and farmers' cooperation and permanent exchange of views between researcher and farming community to share the results.

DEMOGRAPHIC CHANGE



Policies, especially in the long term should aim to make the profession of farming more attractive to young farmers and people who are not farmers by family background. Furthermore, access for those who are willing to take up farming should be facilitated.

MORE EMPHASIS ON EDUCATION AND TRAINING



More emphasis should be put on training of farmers and consumers. Technical and scientific knowledge provided by regions should be better transmitted to farmers. Some of the practices benefitting soil will require farmers to learn about these techniques, their application to different conditions as well as their benefits in order 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.

