SoilCare

SOILCARE FOR PROFITABLE AND SUSTAINABLE CROP PRODUCTION IN EUROPE

Policy analysis: PROMOTING SICs ADOPTION IN CRETE, GREECE

SOIL HEALTH RELATED PROBLEMS ON SITE

Crop productivity

Low soil organic matter

Low soil biodiversity

SOIL-IMPROVING CROPPING SYSTEMS FOR INCREASING SOIL HEALTH IN CRETE, GREECE

The main soil threats in Greece include the imminent threat of desertification, characterised by loss of vegetation, water erosion, and subsequently loss of soil (erosion). SICS that are being tested at the study site are thought to address these soil threats and include:

1. **The introduction of soil-improving crops (Conversion from orange orchard to avocado; cover crops in organic vineyards)**
2. **Different soil cultivation measures (No till and conventional tilling in organic and conventional olive orchards).**

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.

Research indicates that several factors shape the success or failure of policy instruments in Crete, and the uptake of SICS tested in the study site region. These factors include:

- Weak policy coherence
- Ineffective implementation and enforcement of existing policies
- Higher costs of SICS implementation/transition costs
- Availability of conditional payments
- Reluctance to abandon traditional practices in favour of new methods
- Need for better information sharing and training opportunities

CONVERSION FROM ORANGE ORCHARDS TO AVOCADOS

Factors influencing conversion from oranges to avocados:

- Favourable climate
- High cost of implementation associated with the purchase of avocado trees
- Policy set-up, lack of incentives
- Lack of knowledge about new/alternative crop varieties and methods

INCLUDING COVER CROPS IN ORGANIC VINEYARDS

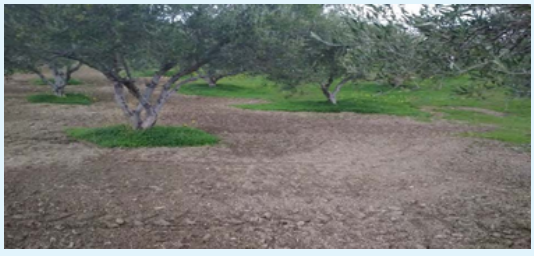
Factors influencing the inclusion of cover crops in organic vineyards:

- Resistance to change (farmers' mentalities)
- Lack of awareness about the long-term benefits

TILLAGE/NO TILLAGE IN OLIVE GROVES

Factors influencing making changes to tillage practices within olive groves:

- Geomorphological conditions (steep slopes, stones, and rocks)
- Lack of awareness and insufficient knowledge



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POLICY SHORTCOMINGS AND OPPORTUNITIES FOR FACILITATING THE UPTAKE OF SICS

The analysis shows that several policies regulate and incentivise the use of cover crops, and reduced tillage, the SICS tested at the study site: direct payments, greening measures, and rural development plans under the CAP all provide financial rewards to farmers adopting reduced or no-tillage practices and cover crops (in the form of nitrogen-fixing crops) but only on certain types of land. In addition, policies implementing the EU Organic Regulation formulate requirements for tillage practices. The Nitrates Directive and the National Action Plan for Combating Desertification promotes the tested practices by explicitly referencing them as good agricultural practices to be adopted in specific areas. None of the policies identified as relevant do regulate or incentivise the uptake of soil-improving crops.

Red circles = SICs uptake promoted through existing mandatory, economic, or voluntary policy instruments in Crete, Greece. 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	●	●									●
CAP Rural Development Programme 2014-2020	●	●		●		●					
Regulation on organic production and labelling of organic products	●		●			●	●				
Protection of waters against pollution caused by nitrates from agricultural sources	●	●	●			●					●
Pesticides Control Legislation							●				
Fertiliser regulation			●								
National Action Plan for Combating Desertification	●	●		●		●					

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POLICY RECOMMENDATIONS

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

INCREASE POLICY COHERENCE

STRENGTHEN POLICY ENFORCEMENT

Increase policy coherence: 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.

Strengthen policy enforcement: While it was found that there are several 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 implementation and enforcement mechanisms. It is clear mechanisms for checking compliance with existing regulations need to be strengthened and expanded. With the post-2020 CAP, new funding rules will be introduced. The Good Agricultural Environmental Conditions (GAECs) now offer a greater chance for soil protection. New conditions with the potential to improve soil health have been added, e.g., the new GAEC 7 requires "No bare soil in most sensitive period(s)". Cover crops will be an important strategy for meeting this requirement. The payment agencies should seek to ensure that these conditions are complied with and verified through, e.g., more frequent inspections and farmer reporting (including for example images of the implemented practices).

SUBSIDISE TRANSITION TO PRACTICES BENEFITTING SOIL HEALTH

INTRODUCE MORE TARGETED FINANCIAL INCENTIVES

Subsidise transition to practices benefitting soil health: The uptake of certain SICS, such as cover cropping, and 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.

Introduce more targeted financial incentives: incentives should be more targeted and tied to specific actions to result in the desired change. For example, a subsidy could be tied to the use of a specific crop or crop change.

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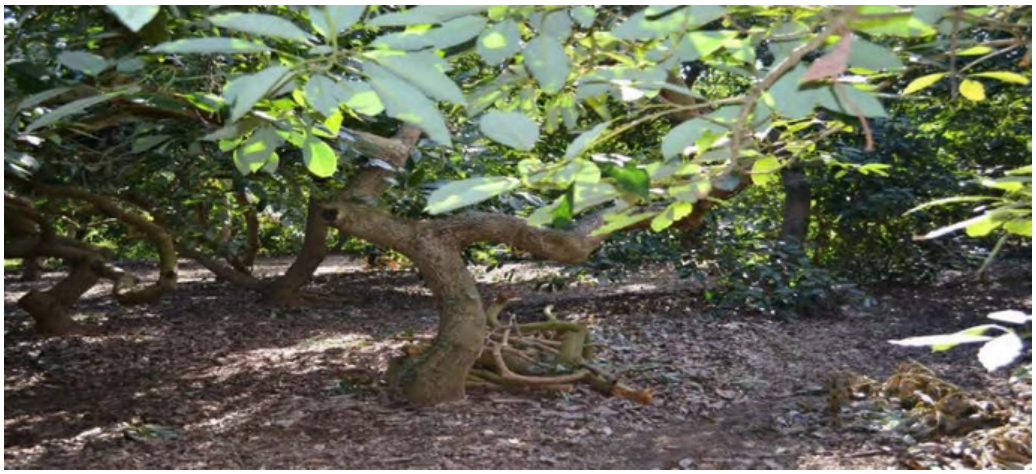
POLICY RECOMMENDATIONS

ESTABLISH MECHANISMS FOR EFFECTIVE KNOWLEDGE DISSEMINATION AND EXCHANGE BETWEEN FARMERS

INVEST IN AND BUILD THE CAPACITY OF FARM ADVISORY SERVICES

Establish mechanisms for effective knowledge dissemination and exchange between 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 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. Workshops, encouraging peer to peer learning, and long-term experiments that will show the benefits of SICS are promising initiatives that can be supported.

Invest in and build capacity of Farm Advisory Services: like farmers, farm advisors also need to learn about new practices, their practical application, costs, and benefits to support farmers they assist. Strengthening the technical skills of farm advisory services and setting up mechanisms for continuous learning are therefore crucial.



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