

# SOLMACC

STRATEGIES FOR ORGANIC AND  
LOW-INPUT FARMING TO MITIGATE  
AND ADAPT TO CLIMATE CHANGE

ORGANIC FARMERS

PIONEER CLIMATE FRIENDLY

AGRICULTURE



# AIMS

- Demonstrate that applying the climate-friendly practices will reduce the greenhouse gas emissions of farms significantly
- Show that farms applying the improved farming practices are less vulnerable to the effects of climate change
- Promote adoption of the innovative practices tested by SOLMACC farmers and thereby contribute to EU climate change mitigation and adaptation objectives in the food sector
- Support additional EU sustainability objectives
  - Soil erosion control
  - Biodiversity conservation and enhancement
  - Sustainable management of natural resources such as water
- Influence EU policies: CAP, Rural Development Programmes on EU, national and regional level, etc.
- Reach out to policy makers, farmers, farm advisors, agricultural students and teachers



# COUNTERING CLIMATE CHANGE

Today climate change is making farming more challenging with an increase in extreme weather events, such as regular and stronger floods and droughts. Harvest losses, irredeemable damage to natural resources and the destruction of farmers' economic viability are among the most serious effects of climate change.

On the other hand, the farming sector is a significant contributor to climate change. Agriculture is responsible for about 10% of the total greenhouse gas (GHG) emissions in the EU.

However, applying the right farming techniques makes a huge difference.

Between 2014 and 2018 twelve organic farms in different European climatic zones will apply specific climate friendly practices. The aim is to become more resilient to the effects of climate change and to spare the environment from detrimental greenhouse gases.

The lessons learnt will be shared widely across Europe's farming community. The more farmers apply climate friendly practices the better we can counter climate change.



# CLIMATE-FRIENDLY PRACTICES

## ON-FARM NUTRIENT RECYCLING

Nutrient loss from farms will be countered by composting plant residues and animal manure. Composted material releases less GHG than openly stored manure, while its application to farmland improves soil structure and fertility. Biogas production from liquid animal waste as well as silage preparation for fertilisation will also be monitored for their positive climate effects.

## CROP ROTATIONS

Diverse crop rotations with forage legumes favour soil fertility, pest management and nitrogen fixation in the soil. The establishment of greater cooperation between livestock and stockless farms, by exchanging fodder for manure, will benefit both parties.

## REDUCED TILLAGE

In combination with adapted machinery reduced tillage can decrease GHG emissions. Diminishing the intensity or depth of ploughing reduces the use of fossil fuels and increases carbon stocks in the soil. It also improves nutrient cycling, reduces soil erosion and nutrient run-off.

## AGROFORESTRY

Combining trees, crops and livestock in one agricultural system contributes to carbon sequestration in above- and below-ground vegetation. The trees in the cropping system help protect against soil erosion and severe climate conditions.

Close scientific monitoring will show how these practices can assist organic farmers to mitigate and adapt to climate change, as well as highlight the economic feasibility and technical needs.



# DEMONSTRATION FARM

## FARMS

SOLMACC farms are situated in different EU climatic regions and represent typical farm types in their respective countries.



# PARTNERS

A wealth of experience and knowledge comes together in SOLMACC. Farmers, farmers' organisations, farm advisors, scientists, national organisations and the European umbrella organisation of organic food and farming.



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