

## OPEN FIELD DAY “AZIENDA AGRICOLA CARAMADRE”

On July 31, 2018, the last Open Field Day linked to the SOLMACC project in Italy took place at Claudio Caramadre's Caramadre farm. The project involved 3 European countries that are very different from each other in terms of climate, Sweden, Germany and Italy, but it has a single common objective: to contribute to the fight against climate change in agriculture, a sector that, in absolute terms, is rather vulnerable and pays for the consequences from an economic, environmental and social point of view.

The Caramadre farm currently has an area of about 40 hectares and its activity consists in the cultivation of winter vegetables both outdoors and in the greenhouse. Soils range from pure sand to loamy-sandy soils.

The invitation to the information day was addressed to specific operators of the fruit and vegetable sector, companies, students, institutions and technicians. The event was attended by about 6 people.



*31.07.2018 – Open Field Days “Caramadre” (Foto credits D. Fontanive).*

During the visit to the farm, the project and its broad-ranging objectives were presented, such as lowering CO<sub>2</sub> emissions and raising awareness of issues such as: limiting soil erosion, reducing tillage and crop rotation.

Within the framework of the climate-friendly practices implemented by the farm, the farmer Claudio Caramadre, described above all the aspects linked to the rotation and use of green manure (the one just carried out and chopped was Sudanese sorghum), adapted to his farm situation.

Agricultural production is based on crop rotations that mainly alternate between brassica, umbelliferous, asteraceous and cucurbitaceous. The period of greatest production runs from September to April.



During the summer it is grown as a green manure herb of Sudanese sorghum, which is then chopped and chopped up, left to dry for 2 or 3 days and worked in the soil, before winter vegetables are sown or planted. Sudanese sorghum is a C4 plant, which allows the absorption of residual nutrients and the production of a considerable amount of organic material, but does not contribute to the fixation of nitrogen. This type of agricultural management based on minimum soil cultivation and the growth of green grass during the summer can be considered a climate-friendly agricultural practice.

The farm also uses legumes, in particular beans and crotalaria (in greenhouses) have been cultivated; above all the latter has given good results, according to the farmer.

The most critical aspect for the farm can be identified in the fact that the timing with which you manage green manure does not always lead to the real usefulness that these can have in terms of contribution of C and N, formation of stable humus and contrast to weeds.

Especially in soils such as the farm's soils with a strong sandy component and a high rate of organic matter mineralisation, it would be advisable to be able to leave the green manure for longer in the soil, so as to have as a result the effective humification of organic matter and consequently improve the texture, porosity and fertility, and thus combat over time the possible erosion of the soil.

During the visit there was an exchange of information and opinions between the farmer and the participants, and also an overview of the different machines used (e.g. milling cutter, de-compactor with curved anchors, transplanting machines) on the farm.



*Seedling of Sudanese sorghum in July (Foto credits D. Fontanive).*