GOOD PRACTICES IN SUSTAINABLE AGRICULTURE

EXAMPLES FROM ITALY AND EUROPE

FACE IT!



FACING THE IMPACT OF CLIMATE CHANGE THROUGH

SUSTAINABLE FARMING

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Introduction

The goal of the FACE IT! project is to support novice gardeners and small farmers in developing their environmental competencies and to contribute to the spread of ecological farming. This brochure presents successful, practical examples that serve as inspiration not only for beginner gardeners but are also easily transferable and applicable elsewhere. The publication compiles best practices that have already proven effective in **Italy** and other **European** countries, which show how to grow crops in in an environmentally friendly way. Each example illustrates how techniques focused on sustainability and biodiversity conservation can lead to higher productivity and economic viability. As part of the FACE IT! project, these methods aim to address the impacts of climate change in agriculture and to provide opportunities for the economic strengthening of rural communities.

Discover the methods and experiences that show how environmentally friendly farming can become the cornerstone of our future!

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1. La Scoscesa – A project of regenerative farming on the rocks



La Scoscesa, a company located among the hills of the municipality of Gaiole in Chianti, is characterized by soils with very limiting properties. Among these are the reduced depth of the organic and mineral horizons, caused by high rockiness and very pronounced surface stoniness: in some areas of the company, it is even possible to see the calcareous bedrock emerging at the surface.

The company's soils have low organic matter content (around 1.2%), an alkaline pH of 8.3, and very limiting values of active lime, around 7800 g/kg.



It is a farm that covers nine hectares of fully terraced land, with about half of the surface covered by woodland and the other half by agricultural crops. The young farm operator has worked to reclaim marginal and abandoned lands, optimizing the spaces and techniques used, and developing the rotation of mixed and complementary polycultures as an excellent solution to protect and increase animal and plant biodiversity. In fact, Lorenzo Costa cultivates more than 150 different edible plant species.

Through the agroecological approach and regenerative farming techniques, plant species are cultivated without the use of synthetic chemical inputs. To protect biodiversity and the health of the ecosystem, organic fertilizers are added to the soil, such as various types of fermented mixtures prepared using different plant species, salt, water, and forest litter, with the main goal of rebalancing the availability of nutrients, fungi, and soil bacteria.

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The organic matter in the soil is increased not only through the agronomic techniques used and the variety selection but also through the production of biochar within the farm, which is then inoculated with fermented mixtures and incorporated into the soil.

The utmost respect for nature and the ecosystem is also evident in the way Lorenzo Costa manages water resources, following the principles of "slow it, spread it, sink it" (as he mentioned in the podcast "Permaculture With You – Protecting Water"). Water management is essential to limit erosion on the farm's soils, which span 130 meters of elevation difference, to avoid wasting water, and to channel it into the subsoil. On the farm's nine hectares, there are 19 basins capable of holding a total of 190,000 litres of water. These basins are connected by a dense system of surface channels that, with their slight slope of about 1%, guide and channel the water along preferred paths that prevent soil erosion and allow for water infiltration.





Homepage: https://www.facebook.com/lascoscesa/?locale=it IT

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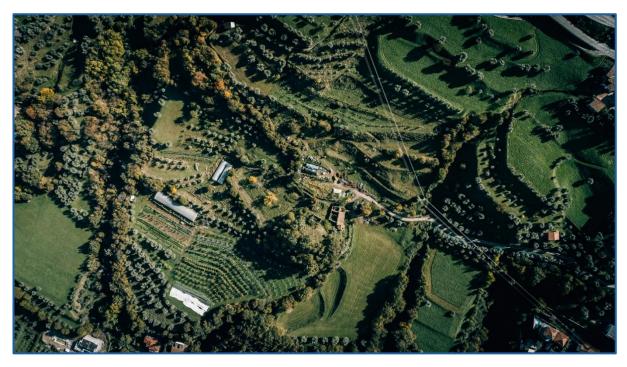
2. The Azienda Agricola ISIDE – Agroecology and ecosystem enhancement



A The farm spans 6 hectares of land immersed in greenery, far from sources of pollution. Vegetables, orchards, olive trees, small fruits, and soon, even animals, will create an integrated agro-silvo-pastoral system, all carefully managed with respect for the environment.

Farming Methods

Crops are produced starting from the regeneration of the soil that hosts them. Following the principle that what we bring to the table should nourish in the deepest sense of the word, the nutritional content of the food we eat is therefore fundamental.



The land is worked beginning with its regeneration, taking into account both the mineral and organic completeness of the soil, so that its vitality is transmitted to the produce through colors, flavors, aromas, and the complexity of micro and macro nutrients that should accompany all foods. No pesticides or synthetic products are used, with the aim of distancing as much as possible from the agro-chemical-pharmaceutical industry, demonstrating that with the right approach and knowledge, organic production can be more economical while maintaining, if not exceeding, the productivity of conventional farming.

If you're interested in trying the farm's products, you can join Iside's C.S.A. (Community Supported Agriculture) by requesting more information via WhatsApp. It is one of the the first direct sales C.S.A. system in Italy that fosters a close relationship between producer and consumer, involving the customer in the planning of the production system and considering the tastes and preferences of those who participate.

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Currently available products include fresh seasonal vegetables, small fruits, fresh fruit, some processed products (creams, pestos, sauces, jams, preserves, etc.), and extra virgin olive oil from Sebino. In the future, the "basket" will be enriched with eggs, bread, herbal teas, medicinal mushrooms, honey, pollen.

Demonstration video:

https://www.youtube.com/watch?v=6Yhn3uo9Bao

Homepage: https://www.biologicorigenerativo.it/

e-mail: agricola.iside@gmail.com

3. Saja projekt – How to transform an intensive citrus grove ina food forest



Saja was founded in Sicily as a social promotion association, officially established in June 2012 (but it had already been active for over a year), with the aim of serving as a laboratory and a meeting place with and within nature. It is a quest for autonomy and self-sufficiency, with the intention not of isolating itself from society, but of introducing new proposals to it.

They primarily work on a land of just under two hectares

that was abandoned until their arrival. Immediately they started planting new fruit and forest trees and restoring the old citrus grove that occupies about half of the area (consisting of approximately 350 Tarocco orange trees, a traditional variety with red flesh). Since then, they have grafted more than 26 different citrus varieties to ensure continuity of production and varietal biodiversity, and have also planted a wide variety of fruits... Lemons, Avocados, Pears, Peaches, Apricots, Jujubes, Apples, Plums, Pomegranates, Quinces, Olives, Serviceberries, Grapes, Mulberries, Figs, Palms, Feijoas, Almonds, Guavas, Persimmons, Pecans, Walnuts, Hazelnuts, Bananas, Sugar Cane, Casimiroa, Cherries, Blackberries, Tea Tree, Elderberries, Prickly Pears, and Pepino.

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Their practices, in line with the principles of Permaculture— chosen as guiding framework— aim to minimize the use of electric or motorized machinery, resulting in energy savings and a more careful attention to individual plants. In the citrus grove and food forest, the soil is not disturbed by any mechanical or manual means to avoid interfering with the delicate microbiological system of the soil. They perform light pruning in late spring and fertilization in winter, using manure exclusively from a nearby organic farm and our chicken coops, compost tea, and cover crops of herbaceous and tree legumes. They work "in-house" with compost tea and bioferments to keep the microorganism population alive and active, promoting healthy plant development.



Homepage: https://saja.it

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4. ClaPi – The restaurant garden



The collaboration between Orma and the Orto di ClaPi project aims to create a garden that serves as an extension of Orma's kitchen in the countryside. This garden is intended to be a meeting point between Chef Roy Caceres' philosophy and regenerative agriculture. ClaPi is located in Campagnano di Roma, and Lorenzo Maggi, born in 1994, "farmer and the only true parasite of the garden," has been involved in agriculture inspired by permaculture principles since 2015, using no chemicals but leveraging the synergies between companion plants and those with pest-repelling properties.



The goal is to produce by going beyond the concept of sustainability and focusing instead on the positive feedback obtained from this type of agriculture. Specifically, regenerating the soil. Increasing organic matter, carbon in the soil, and the biological quality of the soil in terms of beneficial microorganisms, reducing water consumption, and eliminating the use of synthetic substances are Lorenzo's objectives, centred on soil and landscape regeneration. Production mainly uses manual tools. Soil cultivation is minimal, with significant initial regeneration inputs, such as soil enrichment with compost and the use of beneficial microorganisms. The aim is to achieve a final product that is more than just organic, with enhanced nutritional and organoleptic qualities. A dynamic and healthy soil for vibrant, healthy, and tasty food.

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Homepage: https://www.facebook.com/LOrtodiClaPi/?locale=it IT

e-mail: lorenzomaggi 59@gmail.com

5. Graines De Vie – Organic farming in France



The cooperative is experimenting a micro-farm formula. Backed by the Ferme de la Patte d'Oie, which manages field crops (cereals, etc.), it develops its activities in the form of workshops: market

gardening, baking, breeding, arboriculture, processing, training, etc.

The potager de Graines de vie has been around for 15 years. It spans 85 ares, where a wide variety of vegetables, small fruits, and fruit trees are cultivated from mid-January to mid-December. They are very attentive to the taste quality of the vegetables, so they select old and rustic varieties from organic seed suppliers (primarily Bingenheimer). They cultivate on permanent beds, which allows them to continuously improve the health of the soil. Their market gardeners grow about a hundred varieties for the enjoyment of the "eaters" who commit to ordering their vegetable baskets throughout the season. They are pleased to support short supply chains while fostering the emergence of common and solidarity-based buying groups in several Brussels neighbourhoods and in Brabant Wallon.

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The "plein champ" extends over one hectare next to the vegetable garden. It hosts storage vegetables and those that require a lot of space to grow. It is cultivated using animal traction with various traditional tools. In winter, Olivier and his three horses, Crac, Fangio, and Elmo, typically work in logging and tree pruning in the forest. During the growing season, they come to work in the field to prepare the soil for numerous sowings and plantings, such as potatoes, carrots, cabbages, leeks, and more. They also handle a significant portion of crop maintenance through weeding, hoeing, and hilling. Working with horses helps preserve soil health by avoiding the compaction caused by the much heavier wheels of tractors. Horse hooves are much less damaging, yet still allow for effective soil work.



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The marketing strategy is based on GASAP. A GASAP, or Group of Solidarity Purchasing for Peasant Agriculture, is a partnership between consumers and a producer, with both parties committing to a full production season. The key concepts are:

- **Solidarity:** Producers commit to providing quality products, and consumers agree to pay a fair price in advance through a solidarity contract.
- **Transparency:** Product prices are set fairly, taking into account the actual production costs. This allows producers to earn a decent and stable income from their activity. Advance payments enable them to plan their work more easily (investments, crop planning, etc.). Consumers share some of the production risks (such as weather conditions, diseases) by accepting variations in the baskets.



Homepage: https://www.grainesdevie.coop/

e-mail: info@grainesdevie.coop

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6. Illa Do Artes – Permaculture in Galicia



Illa do Artes is an eco-escape, a regenerative agriculture and food forest farm and a centre of appreciation for nature's treasures. As a young family of five in Galicia, the owners see the principles and values of permaculture as a way of life and they aim to help people to develop a better understanding of how to change their

own lifestyle through inspiration into living a more connected, sustainable, responsible and healthy life in a modern World.





At the beginning the property was utterly neglected. For many decades no one had worked the land, looked after the forest and naturally did nothing to the buildings, they were totally derelict. The different elevations provide natural divisions good for areas such as an orchard, a food forest, an Huerta, animal shelters, virgin forest corridors, areas for accommodation, compost stations, green house and a barn.



Homepage: https://www.permaculturegalicia.com/

e-mail: illadeartes@gmail.com

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7. La Loma Viva – Syntropic farming in Spain



La Loma Viva (The Living Hill) is a non-profit Foundation and 15-hectare farm on the coast of Granada, southern Spain. It lies on the foothills of the Sierra Nevada, overlooking the Mediterranean Sea. La Loma Viva is adapting the Syntropic Farming practice of Ernst Gotsch in a Mediterranean/semi-arid climate setting.

In Brazil, Ernst successfully demonstrated that degraded land can be rehabilitated into abundant, edible forest systems, with multiple ecological benefits. This is a radical new approach to farming, using natural processes to create "agro-ecosystems". Through the application of this method, we have notable changes to our soil, decreased water inputs and we are creating a veritable oasis for many forms of life in a severely dry and degraded landscape. La Loma are founding members of the TERRA Network, an international group of Syntropic farming practitioners dedicated to providing high-quality education, consulting and mentoring services.





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Many farms and landscapes have been highly degraded by thousands of years of extractive agriculture, pushing soils and ecosystems beyond their capacity to self-regenerate. When working with such environments, we must first focus on building the system's health, and then abundance and production will emerge as a natural overflow of that regenerated system. Syntropic farming is therefore a radical approach to farming, one that asks us to see the land as a living being, with its own intrinsic capacity for regeneration. Our human role is to facilitate intelligent interventions, using different forms and functions of vegetation, to speed up that process. Multiple layers of densely stacked trees, perennial and annual plants are implemented together, to create forest-like systems, designed to maximise photosynthesis and biomass production. Appropriate species of plants and trees are chosen and planted according to the two main principles of - occupying different strata (Space) and according to their dynamics of succession (Time). This design, along with selective pruning and management, produces a regenerative farming strategy, creating productive and beautiful agro-ecosystems - yielding multiple useful products such as food, fodder, timber, medicine and much more, along with providing essential ecosystem services, like improving soil conditions, increasing biodiversity and regulating the water cycle. In this way, we are able to transform degraded landscapes into potentially climate changing forested farms with environmental, social and economic benefits.



Homepage: http://www.lalomaviva.com/

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8. Quinta das Abelhas – To regreen Portugal



Quinta das Abelhas ('A farm for the Bees') is a learning and research project to develop, test, and study complex Agroforestry systems in the Portuguese Alentejo, with the focus on techniques taught by renegade farmer Ernst Götsch (Syntropic Farming). This project has been started and implemented in December 2019 out of the initiative of Marc Leiber / GrowBack, student of Götsch for more than three years.

The project is supported by Agenda Götsch through consultancy on Design & Implementation of the syntropic farming system. The project site sits within the agricultural estate 'Herdade do Freixo do Meio'. The 600-ha estate could be the perfect incubation chamber for scaling of lessons learnt.

The project has three interconnected goals:

- 1. Adapting the techniques of Syntropic Agroforestry to the context of the Portuguese Alentejo, becoming a Syntropic Agroforestry reference sight, focused on the research and spread of the model at scale.
- 2. Create an oasis for the continued proliferation of pollinating insects.
- 3. Demonstrate how the Mediterranean agro-ecosystem could be regenerated by creating climate resilient agroforests in areas of high risk of desertification, reestablishing the water cycle and micro-climate of the site.

Through achievement of these goals, it is envisioned that agriculture is reinvented as a financially interesting activity for both the older farmers in the regions as well as younger generations that could be drawn back to the countryside.



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In the Alentejo region, long, hot, and dry summers, unpredictable and decreasing winter rains, combined with compacted and degraded soils resulting from overgrazing, make farming an increasingly non-viable livelihood strategy. Lands with traditional extensive silvopastoral systems combining cork and holm oak and pasture have become strongly degraded; the ecosystem is in crisis as many native species are no longer present and have no conditions to newly establish. For instance, many oak trees are in decline without sufficient young trees to take their place, whilst in parallel, pollinator abundance is declining.

A future in agriculture is a meagre one, and young generations moving to the cities have left the countryside nearly empty. So far, attempts to turn the tide, such as many reforestation projects in the area, are failing (with success rates of initial planting material as low as 1%), or are creating incomplete forest systems, which take a long time to establish, and only offer very low productivity. Applying the principles of Syntropic farming, under coordination from renowned Syntropic Agriculture expert Ernst Götsch, this project will search for, apply, and test strategies to cope with and then reverse the increasingly extreme farming conditions. Many small-scale agrarians in the region could greatly benefit from the knowledge created, especially in terms of increasing water availability to plants and potentially decreasing high summer temperatures. The created knowledge could even revive agriculture as an attractive economic option, drawing in young people to return to the countryside.



The Model Farm will initially focus on establishing 1 hectare of typical commodity crops in the region as well as the integration of novel cash crops into existing systems in a way that benefits the farmers and the environment. The one hectare will be divided into four sectors, inside each of which a highly organised plantation of a select combination of some of the cash crops will be established. The planned crops are: peach, table grape, kaki, pomegranate, apricot, olive, citrus, fig, mulberry, blackberry, walnut, pecan, and aromatics. The result will be four unique plantation types on 0.25 hectares (for instance, type 1 combines Pecan, Peach,

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Mulberry, Grape, and Aromatic herbs). The fruit and nut crop produce will be marketed as fresh or dry produce. The plantations will also always be interplanted with a large variety of forestry species, to fulfil a number of ecological functions, as well as vegetable crops in the first years, to generate initial income for farmers, before fruit and nut trees become productive.

Despite the recent initiation of the project, it has become very obvious that this project has a huge potential to inspire a large number of farmers. Since the first open day in July 2020, around 100 people have already visited the first test field, established last winter, and the interest of local projects asking for consultancy is already very high. The test field involves a 0.25-hectare plantation (focused on three varieties of citrus, olives, grapes, figs, blackberries and walnuts). Results from the first test field already show that these techniques work here, and have a highly positive impact on productivity, while drastically reducing the amount of irrigation and (organic) fertiliser required. For instance, the water use on this plot is estimated to be around 20% of what organic fruit orchards in the region typically irrigate.



Homepage: http://www.growback.net/quinta-das-abelhas.html

e-mail: info@growback.eu