



SUST_ENT

UMBRAFLORE

Good Practice Collection Template

Activity 2. Survey

28/02/2025



Good Practice Collection Template - SUST_ENT Project

1. General Information

Good practice title: Energy supply

Reference sector: Agriculture / environment

Country/region of implementation: Umbria, Italy

Responsible entity/organisation: Umbraflor

Contact information: sgamboni@umbraflor.it

2. Description of the Good Practice

Photovoltaic system.

Main objectives:

Production and storage of solar energy for use in the company's production activities.

Brief description:

The production capacity is sized to the company's needs, which are currently served by seven meters with different power ratings. Thanks to storage capacity and the possibility of feeding electricity into the grid, the system should meet the company's current needs and those of the coming years.

Main target groups:

Duration and implementation period:

Since summer 2025.

3. Impacts and Results

Reduced energy withdrawals from the grid and the future replacement of diesel-powered service vehicles with electric vehicles.

Main results achieved:

Success indicators:

Reduction in energy costs.

Benefits and added value:

Economic savings and a reduction in environmental impact.

4. Challenges and Lessons Learned

Main obstacles encountered:

Mainly administrative and bureaucratic obstacles, starting with the authorisations under the responsibility of the Municipality of Spello.

Recommendations for replicability:

5. Annexes and Resources

1. Links to documents, reports or articles
2. Photos, videos or supporting materials
3. Testimonials or interviews



SUST_ENT

AZIENDA AGRICOLA SIBILLA DI FOGLIETTI ENRICO

Good Practice Collection Template

Activity 2. Survey

Enrico Foglietti
28/02/2025



Good Practice Collection Template - SUST_ENT Project

1. General Information

Good practice title: Sustainable management of agriculture

Reference sector: Organic agriculture

Country/region of implementation: Italy - Umbria

Responsible entity/organisation: Azienda Agricola Sibilla di Foglietti Enrico

Contact information: info@sibilladinorcia.com | +39 331 765 3567 | www.sibilladinorcia.com

2. Description of the Good Practice

Main objectives:

The main objective is to implement a set of agronomic actions aimed at optimising agricultural production while minimising environmental impacts, promoting sustainability, obtaining high-quality products and ensuring animal welfare.

Brief description:

Operating under an organic farming regime, the company uses a set of techniques and strategies that minimise environmental impact, promote biodiversity, improve soil fertility and ensure the production of high-quality food without the use of synthetic chemicals.

Maintaining soil fertility: Natural fertilisers such as compost, manure and green manure are used, together with crop rotation, to improve soil structure and its capacity to retain water and nutrients.

Crop protection: Biological control methods are used, including natural insecticides and natural predators; disease-resistant varieties are selected and crop-management techniques are applied to protect plants from pests.

Animal welfare: Farming techniques are adopted that respect animal welfare, with attention to feed quality, access to open spaces and the possibility for animals to express natural behaviour.

Waste management: Waste is kept to a minimum, recycled where possible, and company by-products are used to fertilise the fields.

Main target groups:

- **Environmental sustainability:** The practices help reduce soil and water pollution, save natural resources and preserve biodiversity.
- **Product quality:** Organic practices produce healthier, high-quality food with lower levels of chemical residues.
- **Animal welfare:** The practices ensure a good level of animal welfare, with animals raised in more natural conditions.
- **Resilience of the agricultural system:** Organic practices make the farming system more resilient to climate fluctuations and diseases.

Duration and implementation period:

The company follows the same practices throughout the year and has been certified organic since 1990.

3. Impacts and Results

Main results achieved:

The adoption of these good practices makes it possible to obtain products of excellent quality and healthier products, verified by certification bodies and through ICQRF controls.

Success indicators:

Absence of harmful chemical residues in organic products; high levels of HDL (good cholesterol) in pork; increase in sales.

Benefits and added value:

In a world increasingly attentive to health and the environment, choosing products from organic agriculture represents an important step towards a more sustainable and healthy future. Increasingly, conscious consumers seek organic products and high-quality meat.

4. Challenges and Lessons Learned

Main obstacles encountered:

- **Labour intensity:** Organic farming often requires more manual work for weed control, pest management and soil maintenance than conventional agriculture.
- **Higher costs:** Organic products are generally more expensive than conventional products because of stricter requirements and production practices that require greater investment.
- **Lower yields:** Organic crops may have lower yields than conventional crops because the use of chemical fertilisers and pesticides is limited.
- **Planning and management:** Transitioning to organic farming requires greater planning and management, as organic practices demand closer attention to detail and in-depth knowledge of cultivation techniques.

Recommendations for replicability:

The replicability of organic farming is based on the possibility of applying these principles and practices in different contexts, adapting them to the specific characteristics of each environment.

5. Annexes and Resources

1. Links to documents, reports or articles
2. Photos, videos or supporting materials
3. Testimonials or interviews



SUST_ENT

CRATIA SRL

Good Practice Collection Template

Activity 2. Survey

Cratia srl
28/02/2025



Good Practice Collection Template - SUST_ENT Project

1. General Information

Good practice title: Smartmeteo

Reference sector: Agroclimatic / environmental

Country/region of implementation: Italy / Umbria

Responsible entity/organisation: Cratia srl

Contact information: info@cratia.it | +39 075 32028 | www.cratia.it

2. Description of the Good Practice

In agriculture, the philosophy of calendar-based plant-protection treatments, inspired by the use of fungicides and insecticides to maintain constant crop protection, has traditionally involved applying treatments at the beginning of the season and continuing at regular intervals until harvest, without sufficiently considering the consequences for farm economics and the environment. Growing awareness of environmental protection and new European policies have led to a new strategy based on methods that substantially reduce the use of chemicals and limit them to situations where they are absolutely necessary. This reduction in the consumption of essential production inputs, together with the innovative nature of the project, gives the practice the characteristics of a circular-economy good practice. Field monitoring plays a fundamental role in this process, allowing targeted treatments only when a pathogen or pest is present. Integrating monitoring with forecasting models is therefore essential to reduce the use of plant-protection products and manage crop interventions more consciously.

Main objectives:

General objectives

- Provide farmers with guidance to comply with Directive 2009/128/EC on the sustainable use of plant-protection products and the related national action plan.
- Strengthen resilience to climate change.
- Reduce risk related to the emergence and management of biotic and abiotic plant-health threats.
- Increase the level of digitalisation of information used for the agronomic management of crops.

Specific objectives

- Support farmers in the application of voluntary integrated or organic farming, with particular reference to crop-protection strategies.
- Provide a useful tool for reducing and rationalising the use of chemical inputs.
- Contribute to climate-change mitigation and adaptation.
- Reduce production costs and increase competitiveness.

Brief description:

Smartmeteo is an innovative system for phytopathological monitoring in agriculture that integrates agrometeorological technical-support functions. In recent years, increasingly frequent extreme weather events have highlighted the growing effects of climate change and have exposed crops to new abiotic threats. The aim is to provide farmers with validated, georeferenced information of high technical quality that is also immediately accessible, covering climate trends and plant-health monitoring of the main threats affecting the most widespread crops at regional level. The practice was launched and tested through the establishment of an Operational Group. Encouraging results and co-financing under Measure 2.1 of the Umbria RDP 2014-2022 enabled Cratia srl, a project partner and advisory body accredited by the Umbria Region, to scale up the know-how and develop an operational service supporting farm decisions on crop protection. Fully aligned with the National Action Plan on the sustainable use of plant-

Deliverable: A2.4 Version: 1.0

protection products, the service addresses the needs of Umbrian farmers and provides a useful tool for meeting the challenges of the Farm to Fork Strategy and contributing to the European Green Deal. Over the last two years, the practice has been further enhanced through the use of Smart Crop, a crop-scouting application owned by Cratia srl and designed and developed by the company from a technical perspective. Systematic field data collection through this tool has improved the efficiency of the technicians involved. In addition, the use of a business-intelligence system - in this case Google Looker Studio - makes it possible to provide users, or individual clients aggregating several farms, with specific reports and/or advanced consultation dashboards.

Main target groups:

Direct beneficiaries are agricultural enterprises that can use the service. Indirect beneficiaries include public authorities, because the system facilitates the application of integrated and organic farming specifications as well as compliance with mandatory and/or voluntary environmental rules governing the use of agrochemicals, such as municipal hygiene regulations, water-protection plans and quality systems aimed at continuously improving environmental performance, including the ISO 14000 series.

Duration and implementation period:

The activity was implemented as an innovation project over the four-year period from 2018 to 2021. From 2019 onwards, the experimental results were applied at regional scale to involve an increasing number of farms, thanks to the launch of Measure 2.1 of the Rural Development Programme (advisory services), which made it possible to increase the number of winegrowers involved from 27 to at least 50.

3. Impacts and Results

Main results achieved:

- Reduction of business risk associated with damage caused by plant-health threats.
- Dissemination of a data culture in agriculture through the systematic collection of information in the field and from devices - including phenology, threats, temperature, humidity and rainfall - and through the use of decision-support systems (DSS).
- Increased use of agrometeorological databases by farms and improved accessibility of the data collected.
- Validation of the monitoring protocol and of all activities up to the preparation of the farm plant-health bulletin.
- Creation of a regional information system enabling farms to consult agrometeorological and plant-health data.

Success indicators:

Reduction in management costs (EUR/ha) for plant-protection treatments; climate-change adaptation (number of plant-protection interventions per year); reduction in chemical inputs.

Benefits and added value:

The benefits of applying the Smartmeteo system are multiple. Reducing chemical inputs lowers the external costs of plant-protection treatments and increases the value of ecosystem services provided by farms through the achievement of agroclimatic objectives, with clear social and environmental benefits. From an economic perspective, the practice has delivered noteworthy results in terms of lower production costs and the development of a business concept based on sustainability and innovation, which can represent a strong marketing lever. The use of new technologies and the reduction of environmental pressure from agronomic practices remain important elements for enhancing the value of agricultural products, in line with EU development directions such as the Farm to Fork Strategy within the European Green Deal and programming instruments such as the CAP Strategic Plan.

4. Challenges and Lessons Learned

Main obstacles encountered:

The first major challenge was overcoming the model represented by the Umbria Region plant-health bulletin. When the project began, regional plant-health information was available via a telephone answering service. The project results and the technical-scientific method adopted enabled a cultural leap before a technical one, providing a reference for the development of official plant-health bulletins. At the same time, innovation in the content and delivery of agrometeorological bulletins and crop-protection advice helped bring farmers closer to crop-protection issues, renewed attention to the importance of agrometeorological data and forecasts, and introduced new technological frontiers in modelling the development of biotic threats. The project, and subsequently the service, also helped compensate for regional infrastructure gaps caused by the lack of a dedicated agrometeorological network.

Recommendations for replicability:

Similar approaches exist in other areas of Italy. However, Smartmeteo - first as a project and later as a service - represents a distinctive case because, especially for viticulture, the distribution of points collecting agrometeorological, phenological and epidemiological data is highly representative of the regional distribution of vineyards. Replication in a different territorial context therefore requires a preliminary study to assess crop distribution, topography and agroclimatic characteristics. The versatility of the digital tools also makes it possible to collect field data systematically and return them in aggregated and customised formats. Replication requires a core group of technicians trained in crop scouting and defined, shared crop-monitoring protocols.

5. Annexes and Resources

1. <https://www.smartmeteo.it/>
2. <https://cratia.it/smart-crop/>



SUST_ENT

AGRICOLA CAPODACQUA SNC

Good Practice Collection Template

Activity 2. Survey

Marco Alessandri
28/02/2025



Good Practice Collection Template - SUST_ENT Project

1. General Information

Good practice title: Breeding and improvement of a breed at risk of genetic erosion - Italian agricultural horse breed

Reference sector: Agriculture / environment

Country/region of implementation: Umbria - Apennine ridge - Foligno mountain area

Responsible entity/organisation: Agricola Capodacqua SNC

Contact information: frangiamaro@libero.it | agricolacapodacquasnc@pec.it | +39 329 8429893

2. Description of the Good Practice

Main objectives:

Safeguarding and improving horses of the Italian agricultural breed through breeding activities carried out on the farm, using land in marginal hilly and mountainous areas, specifically in the municipalities of Foligno and Valtopina.

Brief description:

The farm is family-run. The land is used for free-range grazing: the winter and spring phase takes place at the Gallano estate in Valtopina (360 m above sea level), while the summer and autumn phase, from June to December, takes place on the pastures of Monte di Afrile in Foligno (1,000 m above sea level). All breeding phases take place outdoors, following an essential, low-input breeding technique.

Main target groups:

Maintenance and improvement of horses of the Italian agricultural breed, in collaboration and exchange with other farms in the Umbrian-Marche Apennine area, mainly in the Gubbio-Gualdo area and Valnerina.

Duration and implementation period:

Horse breeding began in 2005 and was added to the cultivation of the farm land, which started in 1999.

3. Impacts and Results

Main results achieved:

The activity started with four specimens of the Italian agricultural breed and currently maintains a herd of approximately 20 horses. Work is ongoing to improve the genetic quality of the animals obtained by introducing genetic lines that enhance the crosses produced. In particular, the latest male breeding animal (stallion) was purchased in 2023.

Success indicators:

Results are assessed with the support of the national body responsible for safeguarding the Italian agricultural breed, ANACAI TPR. All animals are entered in a national register and have their own passport recording the animal's characteristics and genetic indices. These registers can be freely consulted by breeders and constitute an important reference database for farms.

Benefits and added value:

The company's activity is economically sustainable and represents a reference point for the territory in terms of using marginal hilly and mountainous land that would otherwise remain uncultivated and/or abandoned. The practice therefore contributes to land valorisation and has an important role in maintaining and improving the landscape, with a positive environmental impact. Over the years,

Deliverable: A2.4 Version: 1.0

experience has also led to the refinement of breeding techniques through direct practice and the exchange of information with other farms, experts and sector bodies; this makes the activity replicable for farms wishing to start similar operations.

4. Challenges and Lessons Learned

Main obstacles encountered:

The main difficulties, especially when starting the activity, were finding suitable land where the activity could be carried out, the financial commitment required to purchase breeding animals, and the development of an effective herd-management system, particularly during the foaling season. These difficulties were overcome through perseverance and the decision to continue, also supported by the results achieved. Some aspects still need improvement, in particular greater awareness among public authorities such as the Umbria Region and the simplification of bureaucratic procedures, including the National Database and veterinary procedures for transhumance.

Recommendations for replicability:

The activity is rooted in a close relationship with the local area. Replicability therefore depends on a careful analysis of development opportunities in relation to the environment and on collaborative relationships with nearby stakeholders.

5. Annexes and Resources

1. Farm register of animals bred
2. Photos



SUST_ENT

GRUPPO COOPERATIVE AGRICOLE DI TREVİ S.C.A.

Good Practice Collection Template

Activity 2. Survey

Luciano Chianella
17/04/2025



Good Practice Collection Template - SUST_ENT Project

1. General Information

Good practice title: Circular economy in livestock farming: biogas and biomethane for a sustainable supply chain

Reference sector: Environmental, energy, economic and technological

Country/region of implementation: Umbria, Italy

Responsible entity/organisation: Gruppo Cooperative Agricole di Trevi S.C.A.

Contact information: luciano@gcatrevi.it | +39 0742 381977 | <https://www.cooperativeagricoleditrevi.it>

2. Description of the Good Practice

Main objectives:

- Reduce the environmental impact of livestock farming.
- Valorise livestock effluents and agro-industrial waste through a circular-economy approach.
- Generate energy from renewable sources and contribute to the energy transition.
- Offer a replicable model for other rural contexts.

Brief description:

Gruppo Cooperative Agricole di Trevi is a cooperative that has operated in Umbria for more than 50 years and is active in milk production from Friesian dairy cows. It launched an environmental-sustainability pathway by installing a biogas plant fed with livestock effluents - manure and slurry - from the cooperative's own barns, together with other organic residues supplied externally. These include poultry litter, olive pomace, onions and flour, all of them local agricultural and agro-industrial by-products. This approach allows numerous waste biomasses to be valorised, reducing waste and contributing to the creation of a local energy supply chain. The electricity produced is fed into the national grid through Enel, generating an additional source of income for the cooperative. Digestate, the residue from anaerobic digestion, is reused internally as fertiliser, closing the production cycle in line with circular-economy principles. A biomethane plant is also expected to become operational shortly, enabling further valorisation of organic by-products and contributing to the energy transition in rural areas.

Main target groups:

- Cooperative members and employees.
- Local rural community.
- Other entrepreneurs interested in sustainable solutions.
- Other farms interested in sustainability models.
- Public authorities, institutions and stakeholders in the agricultural, energy and environmental sectors.

Duration and implementation period:

Biogas: started in 2013 and ongoing. Biomethane: start planned for 2026; activation phase.

3. Impacts and Results

Main results achieved:

- Significant reduction in the company's carbon footprint.
- Sale of renewable electricity to the national grid.
- Elimination of disposal costs for many by-products.
- Direct economic return and agricultural reuse of digestate.
- Growth in the company's reputation as a sustainability model.

Success indicators:

- Percentage of renewable energy produced annually.
- Revenue generated from energy sales.
- Tonnes of livestock effluents and waste transformed.
- Volume of digestate reused in the fields.

Benefits and added value:

- Reduction in greenhouse-gas emissions.
- Partial or total energy autonomy.
- Management of the company's own waste and third-party waste.
- A concrete and replicable example of circular economy in a rural context.

4. Challenges and Lessons Learned

Main obstacles encountered:

- Bureaucratic complexity in obtaining authorisations.
- Long implementation and commissioning times for the plants.
- Very substantial initial investments.
- Need to update the skills of internal staff.

Recommendations for replicability:

- Rely on experienced consultants for design and management.
- Build local partnerships for the supply of waste and by-products.
- Carefully analyse the medium- to long-term economic return.
- Engage the community and raise awareness of the environmental value of the practice.

5. Annexes and Resources

1. Official website: <https://www.cooperativeagricoleditrevi.it>