



From field to glass

A farmhouse brewery builds rural resilience.

EAFRD-funded projects

Location: Sardinia, Italy

Programming period: 2014-2020

Priority: P2 - Competitiveness

P3 - Food chain and risk management

Focus Area: Entry of skilled/younger farmers,
Agri-food chain integration & quality

Measures: M04 - Investments in physical assets
M06 - Farm & business development

Funding:	Total budget	673 067 (EUR)
	EAFRD	146 916 (EUR)
	National/Regional	186 984 (EUR)
	Private/Own funds	339 167 (EUR)

Timeframe: 2016 to 2022

Project promoter: Marduk Agricultural Brewery

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Project results

- Income has grown by more than 11% annually.
- 100% reuse of the by-products of agricultural production.
- Herbicides are not used: sheep grazing keeps the hop weeds under control.
- Creation of 3 seasonal jobs at the farm's point of sales.
- Winner of the national OSCAR Green 2019 award as the most sustainable company in Sardinia.
- Traditional crops are cultivated on the farm, such as the citrus fruit 'pompià' and ancient cereals, enhancing regional biodiversity.
- The brewery has gained a considerable reputation and is regularly visited by tourists and interested local residents.

Key lessons and recommendations

- Passion and the will to overcome obstacles were crucial.
- Experimentation and creative approaches played a crucial role in the brewery's success.
- Innovation enabled the creation of a unique product, which, in turn, helped to define marketing efforts and a distinct brand identity.

Summary

Farmhouse beer is brewed with malts made from raw materials of predominantly farmhouse origin. Two young Italian farmers saw the opportunity for a niche product and created an agricultural brewery with a closed and circular supply chain. The beer is a high-quality product and is marketed through farm outlets. The project funding has enabled the company to diversify to include livestock and traditional, artisanal processing of meat, cereal products and extra virgin olive oil. This range of products is made entirely on the farm.

By-products (barley unsuited to malting, must production residues) help to feed a small herd of cattle and a sheep pasture keeps the weeds under control without herbicides. This model is a closed supply chain and follows a circular economy approach.

The results have been very encouraging. The company is now regarded as among the most promising in its sector regionally and has growth potential to reach national markets.



- > Local resources have contributed to the brewery's success.
- > Sustainability has proven to be a competitive advantage.
- > Collaborations with farmers, distributors and locals have helped to raise the profile of the brand, increase distribution of the brewery's beers and create opportunities for growth and access to new markets.
- > Responding to consumer preferences is key to maintaining commercial success.

Context

Beer production, consumption and exports are growing steadily in Italy. Across the sector, there is a greater focus on environmental sustainability, increasingly oriented towards reducing emissions, water and energy used in production processes.

The Marduk Brewery was established in March 2013 when, after a long period of brewing beer as a hobby, two young men, Mauro Loddo and Giuseppe Murru, decided to dedicate themselves to the production and trade of craft beer, setting up a company and creating their own small brewery.

They also started growing barley and hops. In January 2014, they registered with the Consorzio Italiano di Produttori dell'Orzo e della Birra (COBI, the Italian Consortium of Barley and Beer Producers), which brings together those who grow barley and at the same time produce 'agricultural' beer, i.e. with malts made from barley, at least 51% of which is own-cultivated.

The farm is located in a depopulated area (the municipality of Orsei and the municipality of Irgoli), isolated due to poor road connections.

Objectives

The project aimed to create an agricultural brewery with a closed loop supply chain and to produce a unique and certified quality product with a distinct identity, leading to local job creation on the farm, at the brewery and through the opening of a farm pub where only farm products are served.

The project aimed to achieve progressive product diversification (livestock farming, pasta and 'pane carasau' bread production, extra virgin olive oil). An overarching aim was to improve farm sustainability through the application of circular economy principles and the reuse of farming by-products.



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Activities

The idea was born in 2007. During these early years, the pioneering idea of an all-Sardinian beer was developed, at a time when there were still no agricultural breweries in the region.

In 2013, the first two-vat plant was designed, along with a brewing room for the preparation of approximately 700 litres of beer. The agricultural brewery became operational in 2014, with the aim of brewing beer using only the company's own raw materials, cultivated, processed and produced on the company's own land, as required by the legal definition of agricultural breweries.

In 2017, increasing demand for beer required a strengthening of the production department. The farmers used support from the regional Rural Development Programme of Sardinia to purchase a 1 500-litre brewing room and a 10-quintal malting plant, and enlarged the fermentation cellar to produce around 1 500 hl per year.

In connection with the agricultural brewery, the 'supply chain in the Marduk house' project started in 2018, with the idea of producing raw materials in a single place, processing them exclusively on site and using them for a complete 360° production cycle. This implied agricultural activities (sowing, harvesting, barley and hop production); processing materials produced in the malt house (barley) and drying plant (hops); beer production (wort, fermentation, bottling); supply chain by-products (animal feed, natural fertilisers); marketing and distribution through a short and local supply chain (pubs, bars, restaurants, hotels) and the agricultural brewery (meat, beer, cultivated products). Also in 2018 e-commerce began, enabling the sale of company products nationwide.

In 2021, activities included the expansion of farm production to include artisanal processing of meat (hamburgers, cold cuts), cereal products (artisanal breads and pastas made from durum wheat and barley), extra virgin olive oil and other Marduk-branded



products to enable catering on the farm premises with products made entirely on the farm.

The following year saw the opening of the 'Marduk Sapori di filiera' point of sale, allowing the company's products to be sold and consumed on site and the creation of an e-commerce B2B (business to business) platform. These distribution channels have contributed to a 35% growth in the company's revenue in the last year.

Main results

The project's operating income has grown by more than 11% annually. There is 100% reuse of the by-products resulting from agricultural production, malt production and must production. Herbicides are not used: sheep grazing keeps the hop weeds under control.

New machinery has enabled modern production, bringing efficiency gains and automation. Three new seasonal jobs (mainly for young people) were created at the farm's point of sale and two out of the three workers are women.



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Tillage is carried out by programming rotation cycles to replenish the soil without the use of weed killers and pesticides. All tillage is carried out exclusively by the parent company just a few kilometres from the brewery, keeping all phases of crop growth under control and using at least 95% raw materials produced on the farm.

The company won the national OSCAR Green 2019 award as the most sustainable company in the region of Sardinia.

The company has created an agricultural supply chain that minimises farm waste. In addition to the production of barley and hops used for beer production, the Marduk company has set up a small herd of beef cattle (mainly of the Black Angus breed), fed with the by-products of production and rotation of fodder. Native crops are also cultivated on the farm, such as the citrus fruit 'pompia' and some ancient cereals, enhancing regional biodiversity.

The brewery has gained a considerable reputation and is regularly visited by tourists and interested local residents.

Key lessons and recommendations

Passion for the brewery and the will to overcome obstacles were crucial. Experimenting with new recipes, production methods and creative approaches has played a crucial role in the success of the brewery.

The willingness to innovate has made it possible to create a unique product. This in turn helped to define marketing efforts and the brand identity: from label design to the customer experience at the point of sale, every detail was taken care of to create a distinct and recognisable identity.

Utilisation of local resources has been a key element in the brewery's success and the sustainability approach has proven to be a competitive advantage. Collaborations with farmers, distributors and locals have been instrumental in expanding the visibility and distribution of the brewery's beers and helped to create opportunities for growth and access to new markets. The ability to respond to consumer preferences has been key to maintaining commercial success over time.

Additional information:

Project website: <https://www.birrificiomarduk.com>

Facebook: <https://www.facebook.com/mardukbrewery>

Instagram: <https://www.instagram.com/mardukbrewery>

