



New old roots from farming to power producers... and back

Italy. After a long experience with cattle and dairy farming that dates back to the early 1900s, Pellerei moved to corn and cereals in the 1980s and continued that way until the new millennium. All along, the company also managed a subsidiary logging business, helped by the diversified landscape of the province and the abundance of productive woodland in the surroundings.

In 2006, Pellerei developed their traditional logging business into the specialized production of woodchips to meet the growing demand for this new product. They soon realized that the potential of the local woodland far exceeded the diminutive local demand and that the profits accrued from selling raw fuel were very small compared with those they may have obtained from selling energy directly to the final user. Furthermore, as their skill and industrial capacity improved, so did the distance they had to cover for reaching suitable buyers, leading to increased transportation cost that eroded profit.

For that reason, in 2008 Pellerei decided to build their own conversion plant near the farm centre in Cossato. To that end, they partnered with Ago AG, a German company specialized with energy production projects. This joint-venture endeavoured in the construction of a new wood-fed power plant, which was eventually commissioned in 2011 at a cost over 15 million Euro. The plant had a power of 3 MWe and was based on a conventional Rankine cycle, whereby a chip-fed boiler would supply pressurized steam to a high-efficiency turbine, which would turn the alternator and deliver power into the grid.

The endeavour was an immediate success: annual turnover exceeded 7 million Euro and the company provided direct employment to 28 persons. The indirect employment was much larger: the supply network revolving around the new power station counted over 300 forest and logging businesses, all within a 70 km radius from the plant. Such large network would eventually generate 80,000 green tons of woodchips per year, of which 50,000 tons are currently used to feed the power station and 30,000 tons are sold to third parties.

The operation was so successful that by 2018, Pellerei had bought back all of Ago AG's shares and became the sole proprietor of the power station and its business. Now, the company focused on solving the main extant issue: the utilization of waste heat. As a matter of fact, the plant in Cossato was fitted with cooling towers for dissipating surplus heat, which was used only in a minimal part for heating the adjacent houses of the plant's owners. But no good farmer can stand wasting for long...

Early on, Pellerei had explored the possibility to supply the residents of near-by Cossato with heat, through an underground distribution network, but this project met with the main hurdles of consensus and seasonality.



KEY WORDS

Agroforestry
Industrial plant
Entrepreneurship

COUNTRY/REGION

Italy/Piedmont

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BOOSTING RURAL BIOECONOMY NETWORKS FOLLOWING MULTI-ACTOR APPROACHES

ADDITIONAL INFORMATION

If one cannot sell residential heat, then process heat is the solution. But selling heat on an industrial scale requires an industrial customer, sorely absent from Cossato. Pellerei were then left with scaling up their farming business to high-tech industrial level. In 2016 they bought a 300 m2 high-tech green-house, for the production of horticultural crops. Within the same year, and after some initial testing, the greenhouse was expanded to 1000 m2, and one year later another 500 m2 were added, when soil less horticulture was intro-duced.

Despite the industrial high-tech character of their new stint into farming, Pellerei did not turn their backs to tradition: their horticultural production focused on local varieties of tomatoes, leeks, spinach and other popular veg-etables, which are grown with minimal chemical inputs – a path that is fa-voured by the adoption of soil less agriculture, which removes an essential substrate to the development of weeds and pests. At this moment, Pellerei are waiting for the bio-agriculture certificate, so that their vegetables can be labelled as organic.

Most of the production is sold locally, through the farm outlet and the Let Eat Bi network (<https://www.cittadellarte.it/en/let-eat-bi>). Pellerei have also joined forces with other small farmers in and outside the region, and their outlet sells organic eggs and rice from two local growers, as well as olive oil and citrus fruits from an organic farm in Southern Italy, where those crops grow best.

Future plans include building the much-awaited district heating network in Cossato, as residents have all realized that the power plant is not a bubble, but a reliable partner that can offer hassle-free residential heating at compet-itive price.



ABOUT BRANCHES

BRANCHES is a H2020 “Coordinaton Support Action” project, that brings together 12 partners from 5 different countries. The overall objective of **BRANCHES** is to foster knowledge transfer and innovation in rural areas (agriculture and forestry), enhancing the viability and competitiveness of biomass supply chains and promoting innovative technologies, rural bioeconomy solutions and sustainable agricultural and forest management.

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This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No. 101000375

THE PARTNERSHIP

