



AgroRES
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Maccarese Agricultural Company: from animal farming to energy production

Dina Maini

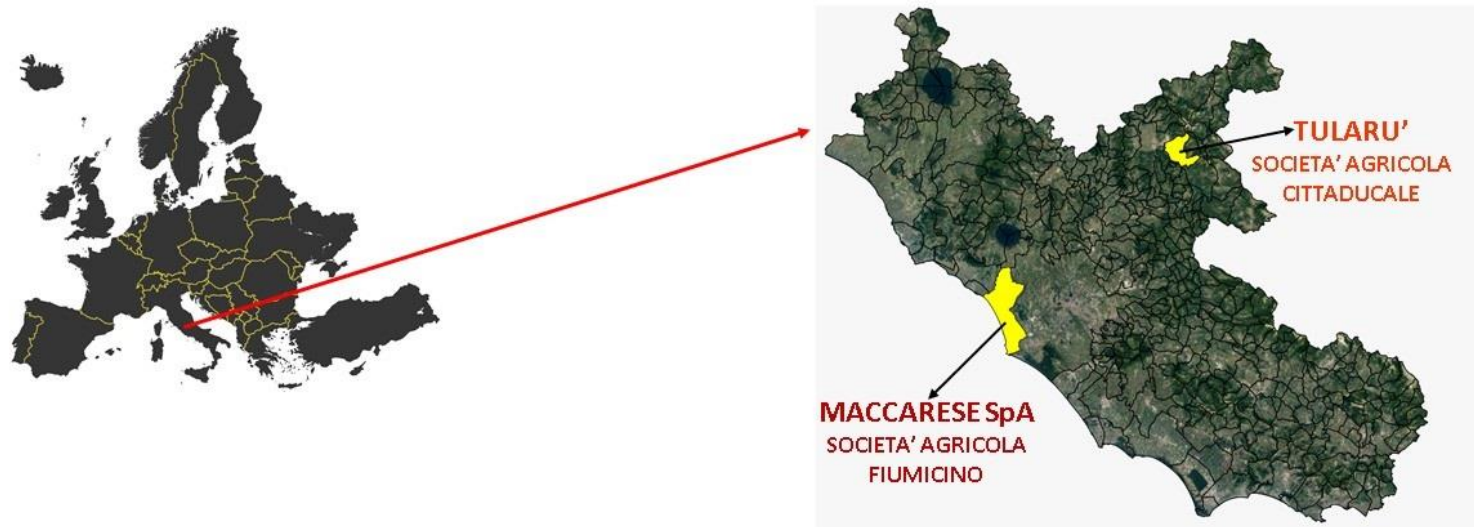
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20-21 October, 2020 | IE2 in North Karelia, Finland

Introduction

The selection criteria



Maccarese S.p.A.

From animal farming to energy production



Some numbers:

- 3240 hectares of flat land
- 3,600 selected cows of the Friesian breed
- 1250 lactating cows
- daily production of 48,000 litres of milk



Maccarese S.p.A.

2 plants for the production of electricity from biogas:

- Built in 2010; with a power of 625 Kw, it is able to produce 4.500.000 Kw net/year. It uses cattle slurry (mc 130/day) and silage (22 tons/day). Articulated on two circular digesters with a diameter of 24 m. by 9 m. of height, it is equipped with a preloading tank, a torch, a feeding system for the loading of silage and uses a Jenbacher j312 engine.
- Built in 2012, it has a power of 999 Kw. It is fed exclusively with cereal silage, and is able to produce 8,750,000 Kw net/year. Articulated on three digesters, it is equipped with an overloading tank, a torch, a feeding system for loading silage and uses a Jenbacher j416 engine.



Validation: “What is interesting about this practice is the high degree of circularity – using own farm waste to produce biogas, and using the remaining digestate also as a soil amendment ...”



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www.maccaresepa.com

Thank you!



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An Organic and Multifunctional Closed Cycle Farm: Energy, Food and Culture

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Tularu' an Organic and Multifunctional Closed Cycle Farm



Production of photovoltaic energy

- *Photovoltaic panels on a roof (6 kw) in energy exchange*

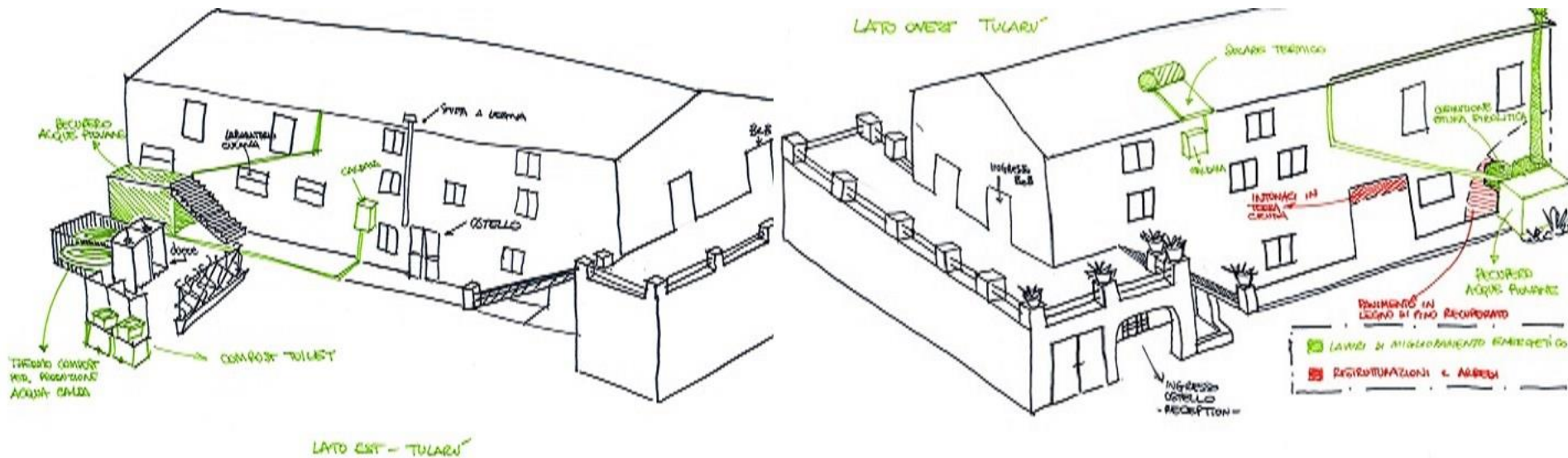
Production of thermal energy

- *Thermal storage: with 800 liter boiler without coil in series and with 600 liter boiler with coil for the production of domestic hot water, powered by solar panels mounted on the roof with east-west exposure;*
- *Inverted flame wood stove (gasification) of 35 kw;*
- *Thermal composting: system of about 30 cubic meters, from branches wood chips, pruning waste and forest cleaning.*
- *Pyrolysis: a wood-fired oven, which produces "biochar" as a byproduct, which, enriched with biofertilizer, guarantees excellent health for farm crops.*

Tularu'

Food and culture

- a chain of ancient grains of Rieti involving 9 other farms, 1 local pasta factory and 2 ovens
- cattle breeding according to the Voisin rational grazing technique proposed by the NGO Deafal, European Delegation for Family Agriculture in Asia, Africa and Latin America, which supports producers who choose a sustainable and natural breeding model.





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www.tularu.it

Thank you!



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