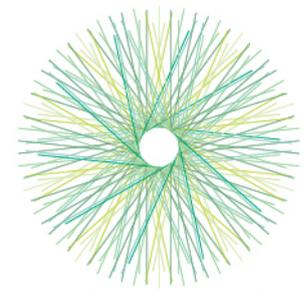


# Press article

## Energy at farm level

JUNE 2018



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AGRICULTURE & INNOVATION

### Press article 500words

#### Farming for energy

#### Italian farmers develop circular economy for clean electricity

**Using waste and crops to generate power is well established among farmers in some parts of Europe, like in Italy. In northern Italy's Po valley, farmers use specially-grown crops to create electricity using the process of anaerobic digestion. According to Anna Trettenero, a farmer who runs biogas digester *Alfalfa Energia*, it ticks both the environmental and income boxes, so long as there is sufficient investment and feed stocks available. "The Alfalfa Energia plant adds value to my region's agricultural production, while working along the principles of circular bioeconomy," she says.**

Facing the consequences of a restructuring sugar sector, a small group of farmers decided to seize the opportunity to diversify and add value to their crops. Trettenero says: "When our regional sugar mill closed in 2006, farmers in my region, including me, were cultivating around 3000 hectares of beet. Urged to look for diversification possibilities and with a favourable national regulatory framework for the development of energy from renewable sources, we figured that our area had a lot of potential for anaerobic digestion. So, we put plans together for a 5 million Euro plant. The facility would be powered by the silage of the main crops produced in the region: corn, sorghum, wheat, barley and rye. Next, we set up a company - Alfalfa Energia - in which the farmers are shareholders. This company bought the necessary land in Bottarolo so that the biogas plant could be built."

The facility became operational in 2012, creating biogas which is then burned to generate electricity. The plant produces 1 MW of electricity and 1.2 MW of surplus thermal energy which is recovered for additional processing. "Our electricity feeds into the national grid," Trettenero says. "we signed up when tariffs were at their peak and we are currently still being paid at a guaranteed price for 1 MW produced. This is sufficient to keep our activities above the survival line, however we know this price support will be phased out in the coming years. The real market price is so low that the installation will no longer be viable after the price support disappears."

When asked how she is dealing with this challenge, Trettenero replies: "As well as electricity generation, we also built our business model around the production and packaging of high quality dehydrated alfalfa. The surplus heat does not leave the facility but is redirected to a dehydrator. The dehydrated alfalfa has been well received, both globally by livestock farmers and locally by Parmigiano Reggiano producers. Still, more innovation could help!" Trettenero already has a plan for how she can generate more innovative ideas: "To get that going, I would like to start an Operational Group that looks into how the plant could be kept viable without policy support." All in all, Trettenero is urging farmers with marginal or unused land to consider what she calls "energy farming" – producing crops specifically to generate power. "In these tough times for farmers, it may provide them with alternative income streams, while keeping their operations viable."

## Press article 250words

### Farming for energy

#### Italian farmers develop circular economy for clean electricity

**Anna Trettenero is one of the farmers in Italy's Po valley who uses crops to create electricity through the process of anaerobic digestion. "It ticks the environmental and income boxes, so long as there is sufficient investment and feed stocks available. Our biogas plant Alfalfa Energia adds value to my region's agricultural production, while working along the principles of circular bioeconomy," she says.**

When their regional sugar mill closed in 2006 because of a restructured sugar sector, farmers, including Anna, were cultivating around 3000 hectares of beet. Urged to look for diversification and with a favourable national regulatory framework to develop energy from renewable sources, their area had a lot of potential for anaerobic digestion. Anna explains: "We put plans together for a 5 million Euro plant. The facility would be powered by the silage of the main crops produced in the region: corn, sorghum, wheat, barley and rye. Next, we set up Alfalfa Energia in which the farmers are shareholders."

Since 2012 the plant produces 1 MW of electricity and 1.2 MW of surplus thermal energy, recovered for additional processing. "We signed up when tariffs were at their peak and we currently receive a guaranteed price for 1 MW produced. However, the real market price is now so low that the installation will no longer be viable after the price support disappears."

Trettenero deals with this challenge: "Innovation could help. So, I would like to start an Operational Group that looks into that." All in all, Trettenero urges farmers to use unused land to produce crops to generate power. "It may provide them with alternative income."

## Background information

### Project information

Alfalfa Energia, Pavia, Italy  
Anna Trettenero

### Pictures

Pictures below are free for use. Click on the picture to download the high resolution version



Farmer Anna Trettenero (on the left) explains to EIP-AGRI Focus Group 'Renewable energy at farm level' members: "The plant produces 1 MW of electricity and 1.2 MW of surplus thermal energy."



The biogas digester is powered by the silage of the main crops produced in the region: corn, sorghum, wheat, barley and rye.

## More information on renewable energy at farm level/ circular economy

The [EIP-AGRI Focus Group 'Renewable energy at farm level'](#) visited Alfalfa Energia during their second meeting in April 2018. The 20 experts will continue to work on the minipapers and the Focus Group report is scheduled to be published early 2019.

### More related EIP-AGRI circular economy topics

- [EIP-AGRI factsheet circular economy](#) (EN – FR – PT)
- [EIP-AGRI factsheet bioeconomy](#) (EN – FR – PT)
- [EIP-AGRI factsheet nutrient recycling](#) (EN – FR)

### Horizon 2020 Thematic Network on circular economy

- AGRIFORVALOR <sup>(MAA)</sup> - Its focus is turning waste, by-products and residues from agriculture and forestry into a valuable product or resource for industry through 'Biomass Innovation Design Hubs': [website](#) - [CORDIS](#) (2015)

Thematic networks are multi-actor projects which collect existing knowledge and best practices on a given theme to make it available in easily understandable formats for end-users such as farmers, foresters, advisers etc. More information on [www.eip-agri.eu](http://www.eip-agri.eu)

## EIP-AGRI Inspiration from your country on renewable energy at farm level and circular economy

Here below you find a list of topics that have been covered in one of the EIP-AGRI events and / or EIP-AGRI publications.

Belgium	Bioconversion of organic waste streams such as hen and swine manure, waste of fish, coffee, vegetables and fruit by black soldier fly ( <i>Hermetia</i> ) in Belgium - Ms Nouchka De Craene	<a href="#">Presentation at EIP-AGRI workshop 'circular economy'</a>
Finland	A grain dryer which is both energy and time efficient	<a href="#">Inspirational idea</a>
Finland	Biovakka, Manure management to produce biogas and nutrients in Finland	<a href="#">Inspirational idea</a>
France	Turning waste into a resource	<a href="#">Inspirational idea</a>
France	Mixed farming in the Aveyron river basin	<a href="#">Inspirational idea</a>
Italy	Plant-based bioproducts to boost regional development	<a href="#">Agrinnovation magazine – n°2 – page 7</a>
Italy	Nutrient spill overs for valuable fertiliser	<a href="#">Inspirational idea</a>
Netherlands	Exploring new crops for the bioeconomy, while improving aircraft safety near Amsterdam Schiphol airport	<a href="#">Agrinnovation magazine – n°2 – page 17</a>
Netherlands	Concrete solutions for sustainability and animal welfare	<a href="#">Inspirational idea</a>

## Operational Groups on renewable energy in your country?

At the beginning of June 2018, the [EIP-AGRI Operational Groups database](#) on the EIP-AGRI website included 36 Operational Groups in the EU working on renewable energy:

- Finland: 2
- France: 3
- Germany: 7
- Italy: 24

## EIP-AGRI

The European Innovation Partnership 'Agricultural Productivity and Sustainability' (EIP-AGRI) is one of five EIPs which have been launched by the European Commission in a bid to promote rapid modernisation of the sectors concerned, by stepping up innovation efforts.

The EIP-AGRI aims to foster innovation in the agricultural and forestry sectors by bringing research and practice closer together – in research and innovation projects as well as via the EIP-AGRI network.

EIPs aim to streamline, simplify and better coordinate existing instruments and initiatives, and complement them with actions where necessary. Two specific funding sources are particularly important for the EIP-AGRI: the EU Research and Innovation framework, Horizon 2020, as well as the EU Rural Development Policy.

- [EIP-AGRI Brochure on the EIP-AGRI Network \(2015\)](#) (EN – BG – FR – GR – HU – IT – PT – RO – SP)
- [EIP-AGRI Brochure on Thematic Networks under Horizon 2020](#) (EN – BG – FR – HU – SP)
- [EIP-AGRI Brochure Horizon 2020 multi-actor projects](#) (EN – BG)
- [EIP-AGRI Brochure on Funding opportunities under Horizon 2020 - 2018 Calls](#) (EN)

## EIP-AGRI Operational Groups

EIP-AGRI Operational Groups are groups of people who work together in an innovation project funded by Rural Development Programmes (RDPs). Operational Groups are the EIP-AGRI's main tool for turning innovative ideas into real solutions for the field.

An Operational Group consists of several partners with a common interest in a specific, practical innovation project. The people involved in the Operational Group should bring in different types of practical and, where necessary, scientific expertise. They may include farmers, scientists, agri-business representatives and many others. Every country or region has the possibility to define specific national demands or restrictions on how to put together an Operational Group.

- Visit the [Operational Groups page](#) on the [EIP-AGRI website](#)
- [EIP-AGRI Brochure on Operational Groups: Turning your idea into innovation \(update 2016\)](#) (EN – BG – CZ – FR – HU – PT – RO – SK – SP)

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