

Feedbacks from our first event

On May 17th, the first LIFE CHIMERA event took place at Hotel Concorde in Camerano (AN) and was made of three main parts: info session on the project status; networking session and visit at the two prototypes installed at Fileni's farm in Osimo and Lorenzetti's farm in Castelfidardo.



LIFE-CHIMERA hits

The event of May 17 has been the occasion to gather in one-place stakeholders following LIFE CHIMERA project since the beginning and, at the same time, raise interest and awareness on the project thanks to an intense press activity. Check the interview to Michele Marcantoni, Rosalino Usci (3P Engineering CEOs) and Mark Renders (Renders&Renders farm owner) published on **E'tv Marche** [here](#).

During the event, the project team presented the first results of the project.

LIFE CHIMERA has been awarded by the European Commission through the [LIFE Program](#) because it was **very high-scored on five main pillars**

- It presents an innovative technology;
- It addresses specific environmental priorities (Nitrate Directive 1991);
- It has a strong environmental impact;
- It is business oriented;
- It will be tested in the Netherlands, where it is most needed.

Mark Renders, project partner and owner of the Renders&Renders farm, located in the Brabant region (The Netherlands), underlined the gravity of the problems related to manure for breeders and how CHIMERA solution could allow its farm to be independent on manure management and become self-sufficient on the energetic point of view. Moreover, being the final product of the process a fertilizer, the business model for farms could completely change: “Now we have something – manure – that nobody wants and represents a cost. With CHIMERA we have something – the fertilizer – that everybody needs and is disposed to pay” – he said.

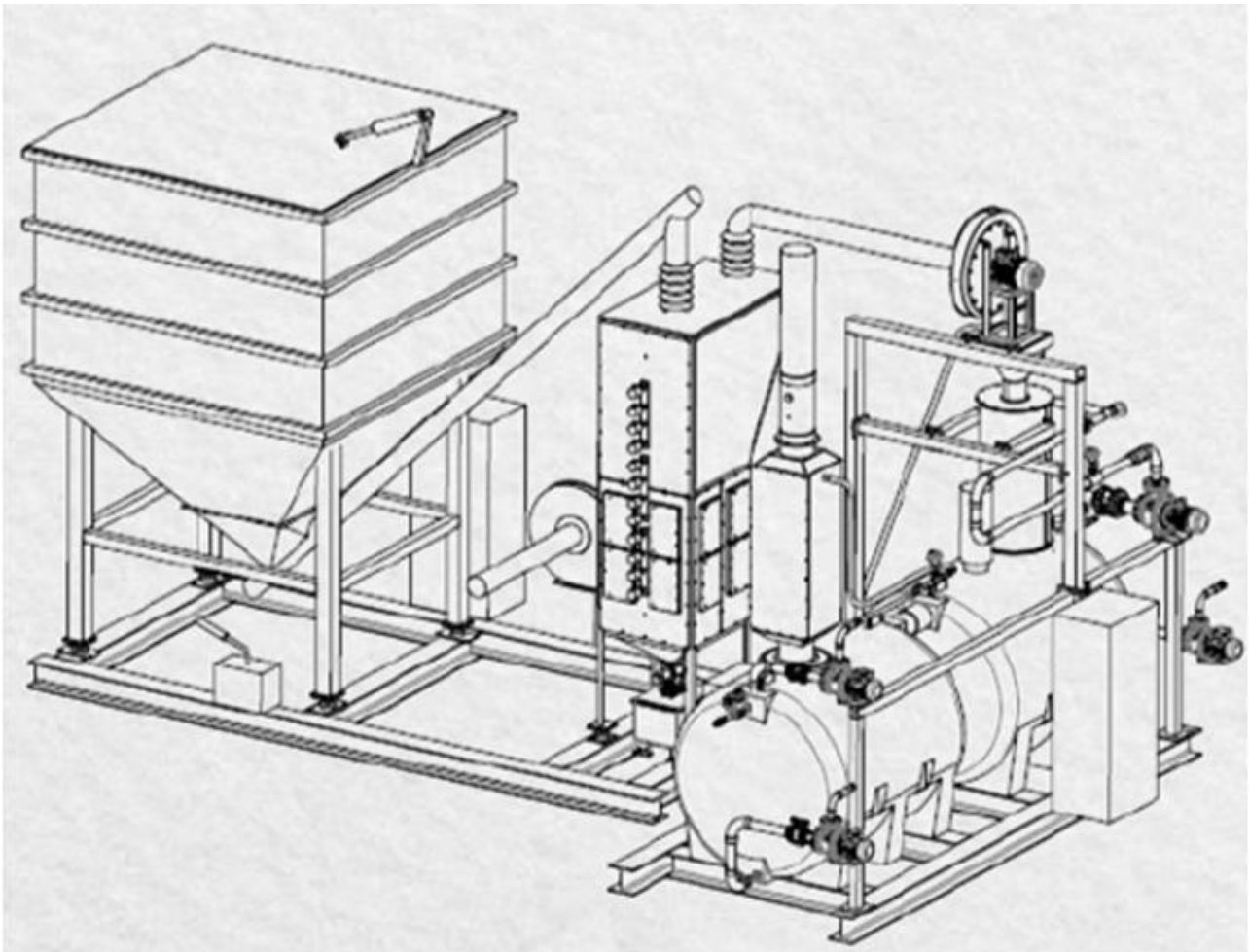
Rosalino Usci, 3P Engineering CEO, highlighted that nowadays-traditional solutions for manure management imply stock within the farm, high transport cost, waste treatment (direct disposal or incinerator/biogas). Thus, we have to treat manure as a special waste. CHIMERA solution allows the avoidance of stock, transport, and disposal and guarantees an «in farm» valorization of manure through the production of energy and fertilizer.

Thanks to CHIMERA, there is no need to dry manure: the cost of the dryer – ca. 130000 euro – is the very first **saving** for the breeder, especially in laying hens' farms.

For all farms (broilers and laying hens) sized 250000[head/YY] with approximately 9125ton/YY of manure production, CHIMERA installation would allow a saving of around 300000 euro per year.

The **prototype installed at Fileni's farm in Osimo (AN)** is composed by:

- Loading system
- Combustor unit
- Heat sink
- Smokes treatment unit
- Software System and Remote Control



The **first tests** put in evidence some empirical complications related to the insufficient cochlea speed, choking problems caused by manure inside cochlea, difficulties in hopper loading and ashes flow problems. However, 3P engineers overcame all those, below is explained how.

Insufficient cochlea speed

Even if used at its maximum speed, cochlea did not manage to compensate burned mass: burned mass was greater than the introduced one. The solution has been to vary the transmission rate between the engine and the final part of the cochlea.

Choking problems

Using cochlea at its maximum speed caused the accumulation of a great quantity of material inside the cochlea that did not manage to flow out of the short output tube. That is why a steel element was settled in the cochlea axis, in order to make easier the passage of material through the tube. Also, a divergent to the end part of cochlea was added in order to reduce risk of manure blocks at the cochlea output.

Difficulties in hopper loading

In order to improve hopper charging, a conveyor belt was added.

Ashes flow problems

Ashes remain over grid and they do not flow to the collection chamber: they form blocks that are too big for the grid dimension. 3P engineers will put wider grids and add an electric shaker in order to move the grid and ease ashes flow.

The main **first results** obtained thanks to the prototype are: prototype tests with graphics reporting (temperature values, burned mass, cochlea speed); emissions tests; manure analysis and ashes analysis.

3P Engineering is working on finding a **steady working mode** of the prototype. The tests show the possibility to vary emissions value using different combustion parameters and they are searching the right ones in order to limit emissions as much as possible.

Strength points are that **the system does not need water addition** and material analysis ensures the **possibility of using ashes for the fertilizer**.

Networking session

During the networking session, participants had the possibility to share the first impressions on the CHIMERA solution presented. They split in two groups to talk about these main topics: manure management and fertilizer production.

The first group – manure management – focused its attention on the positive effects of managing manure within the farm, especially from the health point of view, thus avoiding the problems related to diseases and contagions.

The second group confronted on the difficulty of inserting CHIMERA fertilizer in the list of the ones allowed by the Italian law since it is a very strict and procedures to change it are long.

Moreover, chicken manure nowadays is already considered a fertilizer: why farmers should use the CHIMERA one? Probably, if the farmer sells the fertilizer, the cost would be too high for the market. It could be much more convenient to use the fertilizer for his own feed fields.

Discussions will continue in the next months around those topics. What is for sure is that organic composts are not clearly regulated in Europe and the pilot plant in the Netherlands can help us having a precedent over the use of CHIMERA fertilizer, which is completely green and obtained through circular economy principles.

Networking among participants continued during the site visit to the prototypes where participants had firsthand experience of the plant and checked the functioning of the control room.

[See pictures HERE!](#)



CHIMERA is a [LIFE](#) project

LIFE CHIMERA - CHICKENS MANURE
EXPLOITATION AND REVALUATION"
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