



# EIP-AGRI Workshop

## 'Opportunities for farm diversification in the circular bioeconomy'

### DAY 1 (PART 2) – 6 FEBRUARY 2019

16:25 – 17:45

#### Break-out session

#### Which opportunities can farmers and foresters pursue when diversifying into the bio-economy?

- Livestock Farming: Mr. James Gaffey – Scientific Coordinator on the H2020 Biobased Industries Joint Undertaking (BBI JU) project ICT-BIOCHAIN, focused on developing efficient biomass supply chains for sustainable chemical bio-economy regions.
- **Arable Farming: Ms. Anna Trettenero – A farmer herself she runs a biogas plant in cooperation with other arable farmers in Italy.**
- Permanent Crops: Mr. Tomáš Fénix – He runs an organic family fruit and wine farm in southern Moravia, testing various circular bio-economy initiatives on his farm.
- Forestry: Mr. Bernard Carey – involved in the Operational Group Biomass to Biochar for Farm Bio-economy (BBFB) in Ireland.

*The session continues with facilitated discussion addressing specific questions*

Harvesting the results of the break-out session.

17:45 – 18:00

#### Wrap-up of the first day

**Anna Trettenero**  
Innovative biogas plant



funded by the European Commission

# Presentation

## Adding value to innovative sustainable farming

- Who I am and what I do
- Azienda Agricola Anna Trettenero, 100 Ha, on lease from the family. Row crops on Conservation Agriculture, no-till, crop rotations and cover crop, since 2005
- Alfalfa Energia srl Società Agricola, 1MWe + 1,2MWt cogeneration anaerobic digestion biogas plant. Co-founder and managing partner. Own innovative technology. Thermal energy recovery for processing of high quality dehydrated alfalfa, own technology.
- Ongoing developments

# Conservation Agriculture no-till, crop rotation and cover crops



# Conservation Agriculture

Increased soil carbon - CO<sub>2</sub> sequestration

Environmental ecosystem services - Increased resilience



# Conservation Agriculture CA & Biogas Plant Part of a Circular Bioeconomy process

- Pioneering is generally speaking not an easy task
  - CA & circular approach: no-till has a special focus on biodiversity and the re-use of resources; diversifying crops forces you to find new market opportunities and cover crops loop back to the soil
  - Biogas & circular approach: dedicated crops and ag side-stream products used as feedstock. Farmers are shareholders of the plant. Own innovation through hands-on experience. Digestate loops back to the soil. Thermal energy recovery for Alfalfa and other forage dehydration
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- Quality Jobs
  - Key words: growth, diversification, evolution, innovation, different perspectives
  - Lots of work, team work

# Alfa Energia innovative biogas plant

Increased efficiency - Thermal energy recovery  
Alfa dehydration plant - Methane production R&D

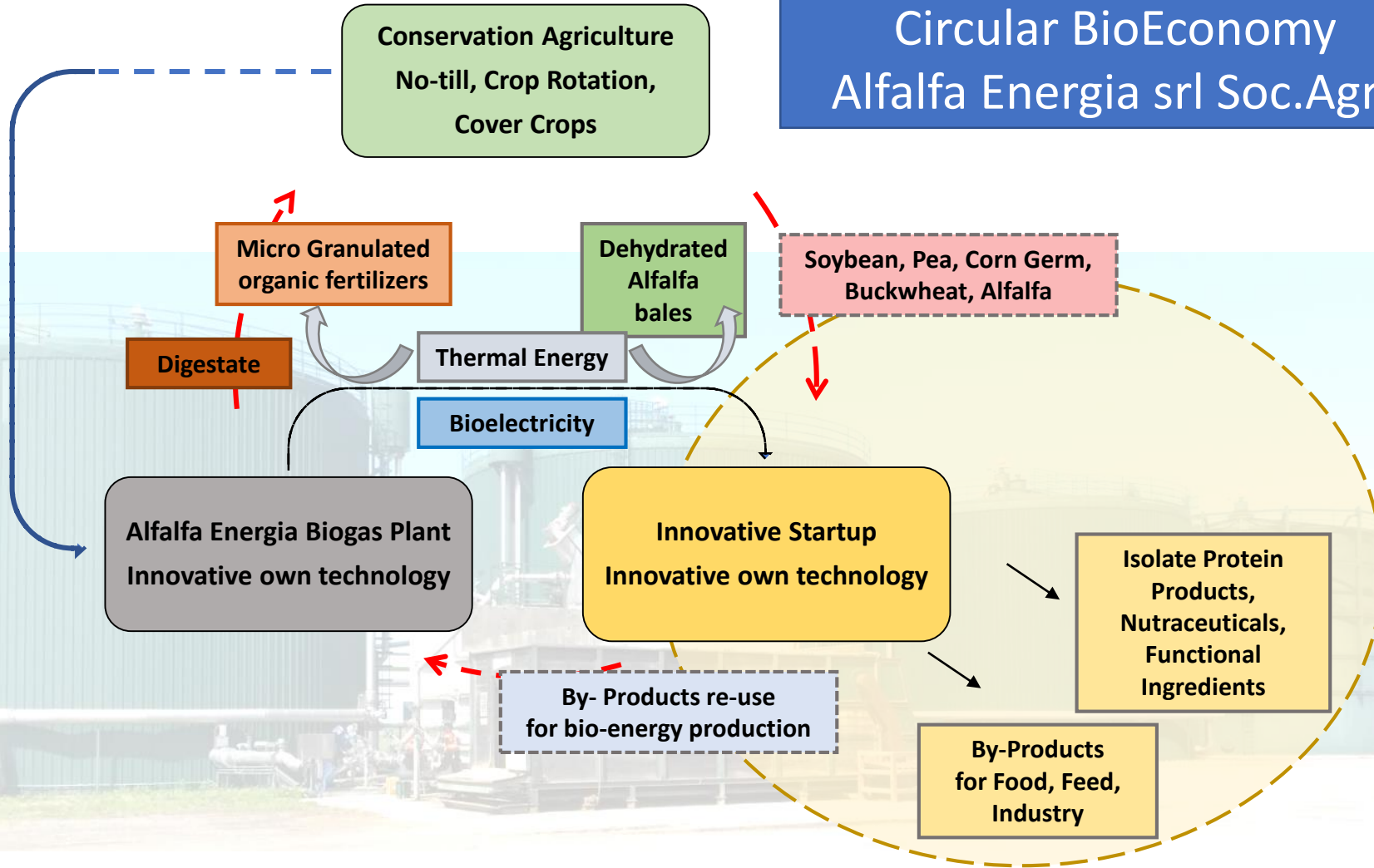


# Innovative Biogas Plant linked to the local agricultural production - Thermal energy re-use for processing of high quality Alfalfa





# Circular BioEconomy Alfalfa Energia srl Soc.Agr.



# Circular Bioeconomy & Farming Past&Present

- Bioeconomy and how its circularity involves farming is a hot topic
- To me, it seems like farmers have been involved in circular bioeconomy by definition
- Producing agricultural crops for food, feed and processing, re-using by products and returning back nutrients into the soil was the typical farming model
- Progress has often changed this equilibrium for part of the by products have been taken away and sometimes considered as waste and soil fertility has not been taken enough into account, therefore causing a decrease in soil organic matter over the years
- Farming land has somewhere turned into a mine or a pothole, which does not represent circular bioeconomy

# Circular Bioeconomy & Farming Present&Future

- There is now the opportunity to re-design a circular approach in agriculture
- Farmers need to take active part in the process
- Circularity starts and ends in the soil, primary source of our production today and for generations to come
- The circular bioeconomy process has to be sustainable economically, socially, environmentally
- It has the potential to boost European economy with new products and market opportunities, to differentiate production, reduce risks, evolve and interact at regional level with local companies
- The loop has to be safe
- The progress of the circular bioeconomy approach is linked to the spread of a sustainable model beyond private/corporate interests for the benefit of the social community in Europe

# Circular Bioeconomy & Farming

## Final remarks

Farm diversification is crucial for reducing economical risks and help European farms to evolve towards a market driven economy

Pioneers in circular bioeconomy develop a model that can be replicated in the territory in order to spread circularity and its advantages. They need to be sustained in their process

Farmers must play a key role in the loop and must be rewarded for the value chain and for positive social and environmental externalities provided by circular bioeconomy farming

➤ Key features: innovation, interdisciplinary teamwork with PMI, academics, farm extension services, counseling, financing, timing