

Sustainable biogas practices: the Italian case of SMARTGAS project

Giulio Borgia - Az. Agr. Le Rogaie, Tuscany (Italy)

3rd meeting of the ENRD Thematic Group on Bioeconomy

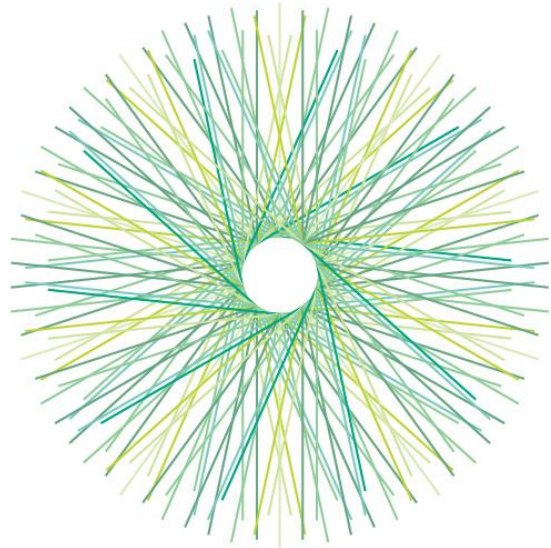
Brussels, 15 May 2019

«YES»TO BIOGAS AND DIGESTATE

- 1) better handling of slurry/manure
- 2) less smell
- 3) better agronomic utilization of components of slurry
- 4) less use of chemical fertilization
- 5) best step to introduce reduction of nitrogen
- 6) chance of upgrading slurry/manure
- "[the shit museum](#)"
- 7) chance to open the farm to new business biorefinery
- 8) integration of farmer income for selling electricity / biomethane
- 9) higher level of farmers' professionalism
- 10) facilitates generation change

There was a fear of biogas competing with food production,
but we noticed an increase! Especially organic production benefits of biogas!!!

PARTICIPATING IN



eip-agri
AGRICULTURE & INNOVATION

funded by  European Commission

OPERATIONAL GROUP

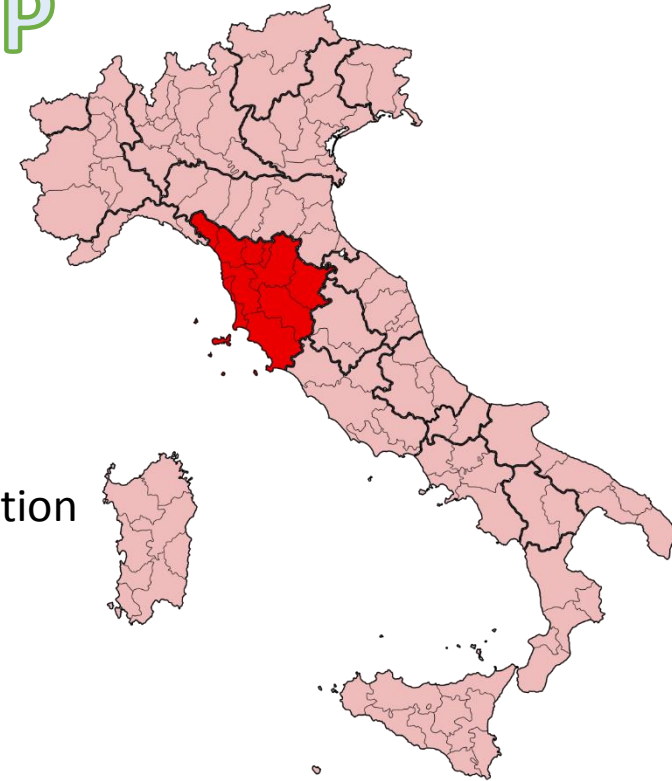
Rural Development Programme of Tuscany

Region:

- **Measure 16.2** (cooperation)
- **Measure 1** (knowledge transfer and information activities)



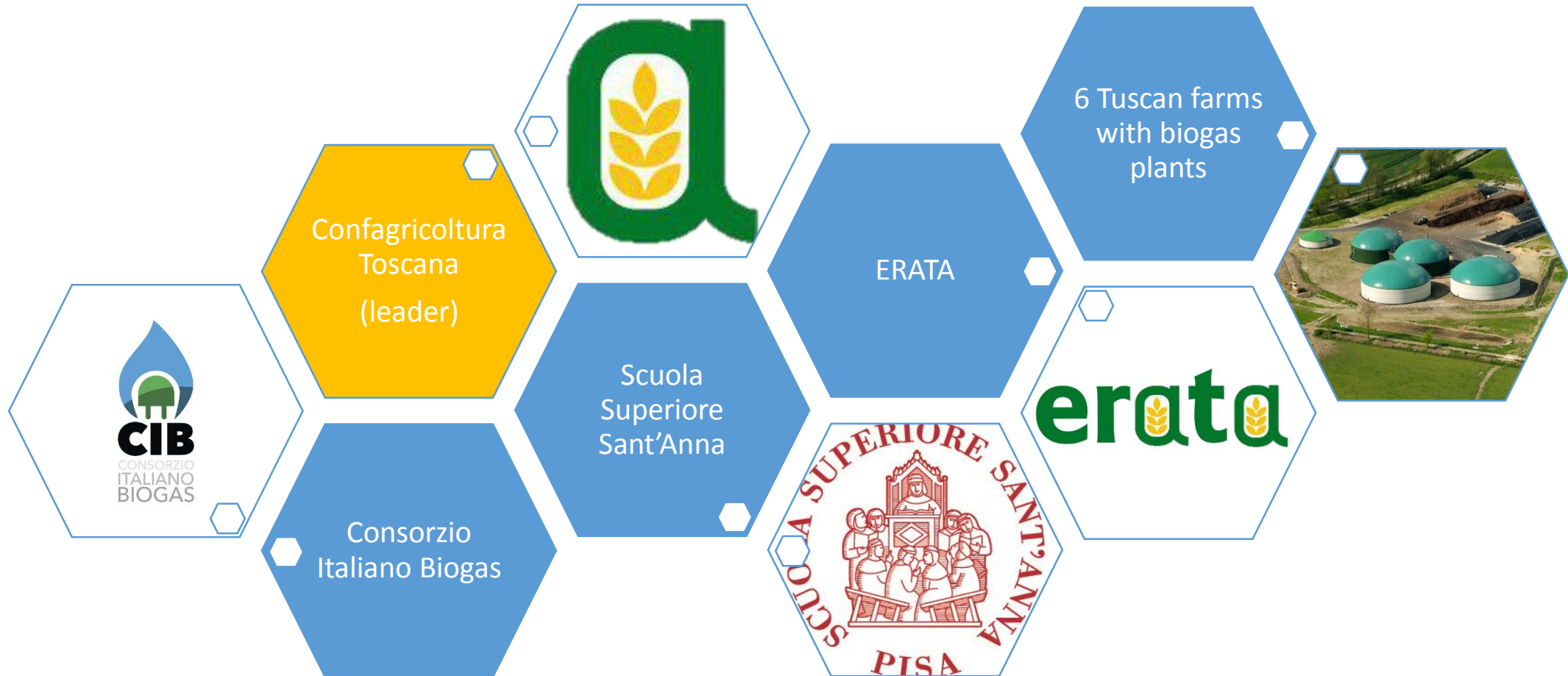
February 2019 – October 2021



SMART + BIOGAS

farming *WITH* biogas to reduce carbon footprint and increase sustainability and resilience to climate change of cropping systems for quality Tuscan products

THE PARTNERS



THE CONTEXT



Farmers can play an **active role** in GHG mitigation

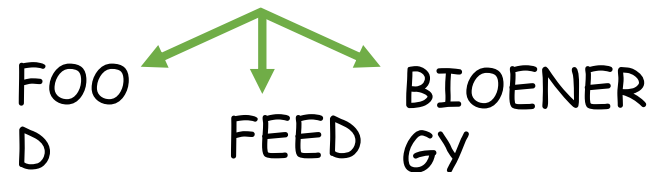


How?

- ➔ **Reducing the use of agricultural inputs and energy** (i.e. fertilizers)
- ➔ **Sequestering carbon** in farmlands soils

How?

More efficient use of digestate AND tillage techniques in cropping systems



THE OBJECTIVE



Identify, test and promote **both technological and agronomic solutions** in order to support the **long-term consolidation of the agricultural biogas sector in Tuscany**

**IN TUSCANY DIGESTATE
IS NOT USED AT THE
BEST OF ITS POTENTIAL!**



TECHNOLOGICAL INNOVATIONS



Conservation and minimum tillage



Sub-surface and side dress distribution of digestate



Digestate microfiltration and use in micro-fertigation

PROCESS INNOVATIONS (management strategies and agricultural techniques)



Double cropping (winter + summer crops)



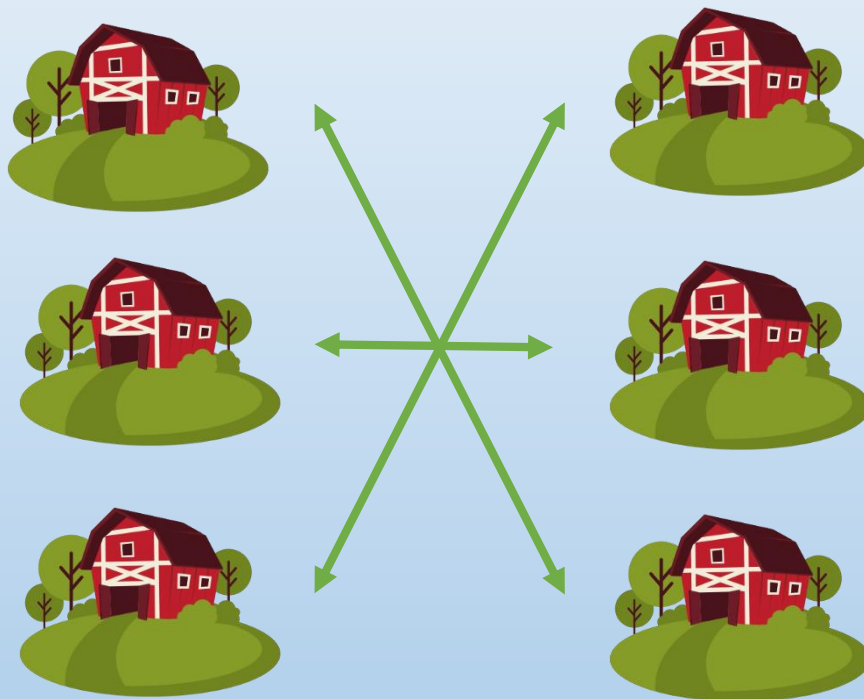
Catch-crops



Conventional and unconventional multiannual species



Confagricoltura
Toscana



Sant'Anna
Scuola Universitaria Superiore Pisa

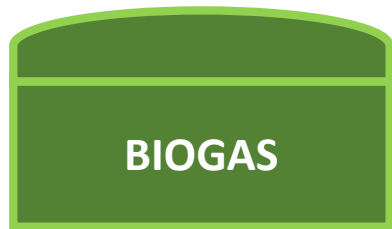
erata



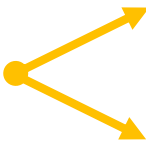
Agrotechnical and agronomic innovations in the Maremma area: double cultivation at the service of dairy livestock



Renewable energy

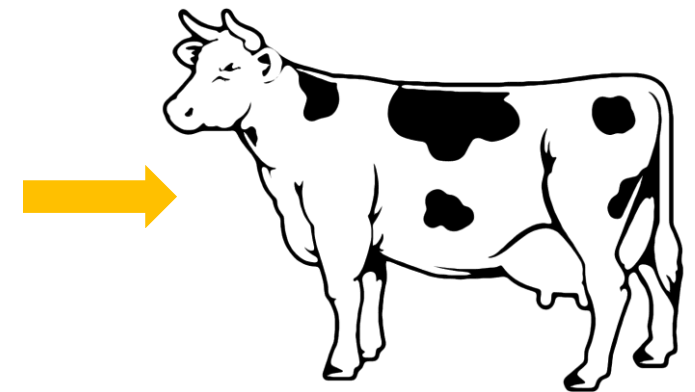


Digestate



Distribution in pre-seeding

Split distribution, with coverage intervention



*Thank you for your
attention!*



www.smartgastoscana.it



fedtosca@confagricoltura.it



#SMARTGAS