



SCIENZA PER AMORE

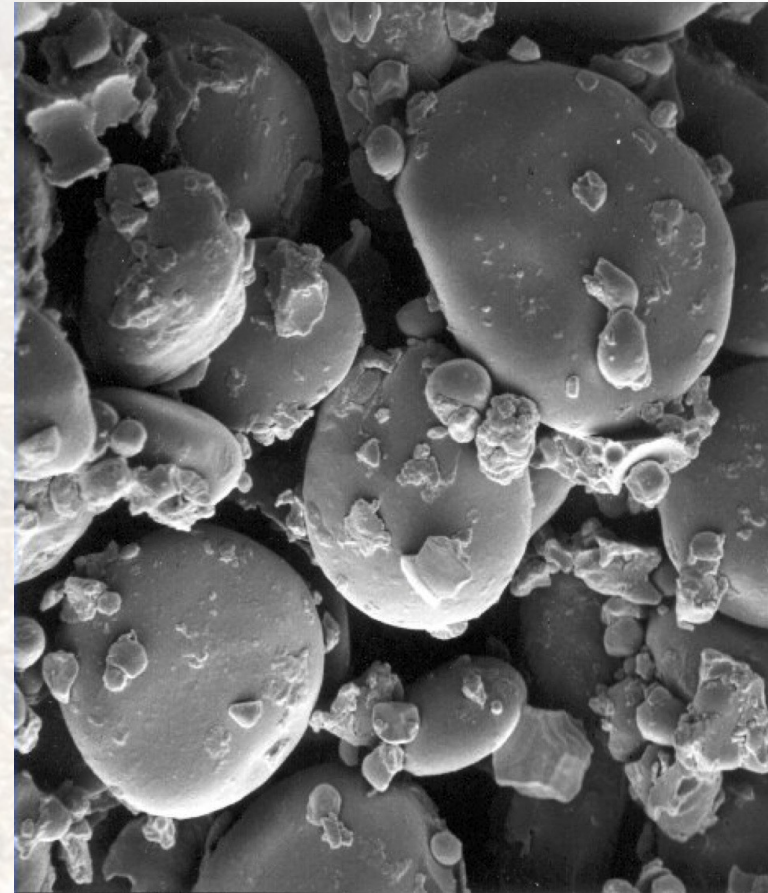
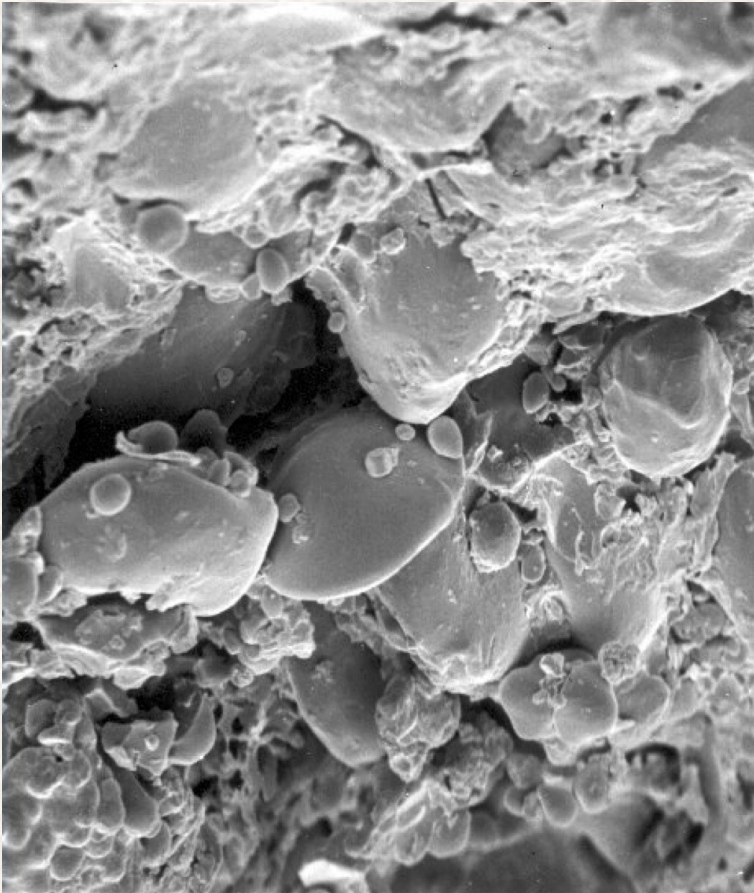


PROJECTS FOR DEVELOPING COUNTRIES

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Results of barley processing with traditional milling and with Hyst technology (right)



Electron microscope scan (x 2,500)

THE “**BITS OF FUTURE: FOOD FOR ALL**” PROJECT

The idea: to use Hyst technology to address the problem of hunger creating the conditions for sustainable and lasting development.

Scienza per Amore, in collaboration with BioHyst company, intends to make available free of charge Hyst plants which will be the core of industrial installations for the processing of local resources.

The World Bank and the African Development Bank have expressed their interest in the project and their availability to be involved in the construction of industrial sites for civil works and the necessary parts collateral to Hyst plants.



HYST: **PILOT PROJECT**

Some African countries interested in the project have stressed the availability of abundant agricultural waste of no value.

We have therefore designed an integrated system for the processing of this waste in order to obtain food and energy towards progressive self-sufficiency.

We must consider that food shortages are the result of a series of problems, so complex and interrelated that they impose a comprehensive approach for a stable solution.



HYST: **PILOT PROJECT**

For this reason the pilot project was organized with three objectives:

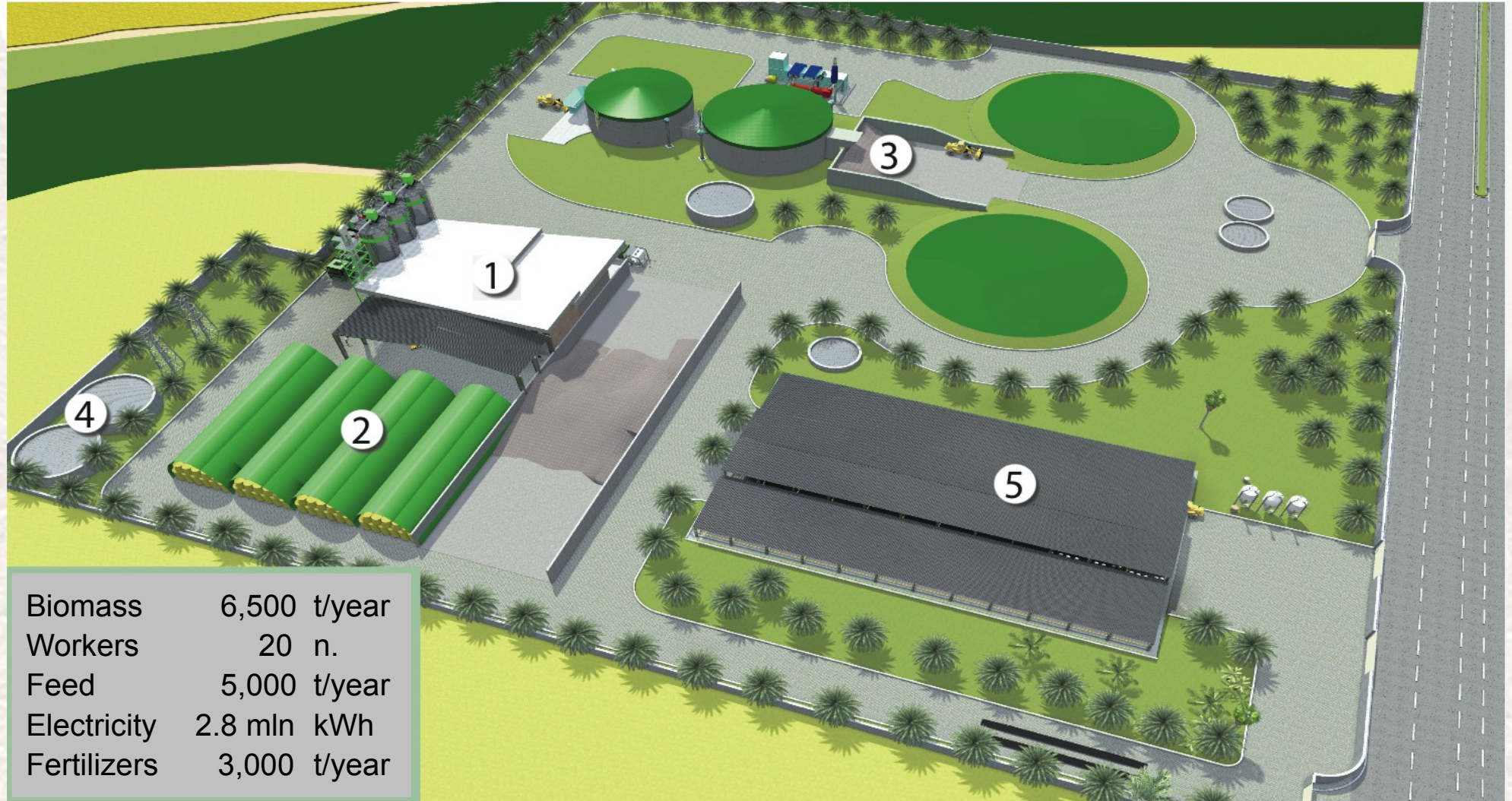
- to meet the food needs of the population;
- to ensure self-sufficiency in energy and water for the installations;
- to supply neighboring communities even in areas lacking necessary infrastructures.

The Hyst plant designed for this project extracts two different products from agricultural waste with the same single treatment:

- a finished product, a feed which concentrates nutritional components;
- an intermediate product, matrices to be used in the biogas installation to produce energy.

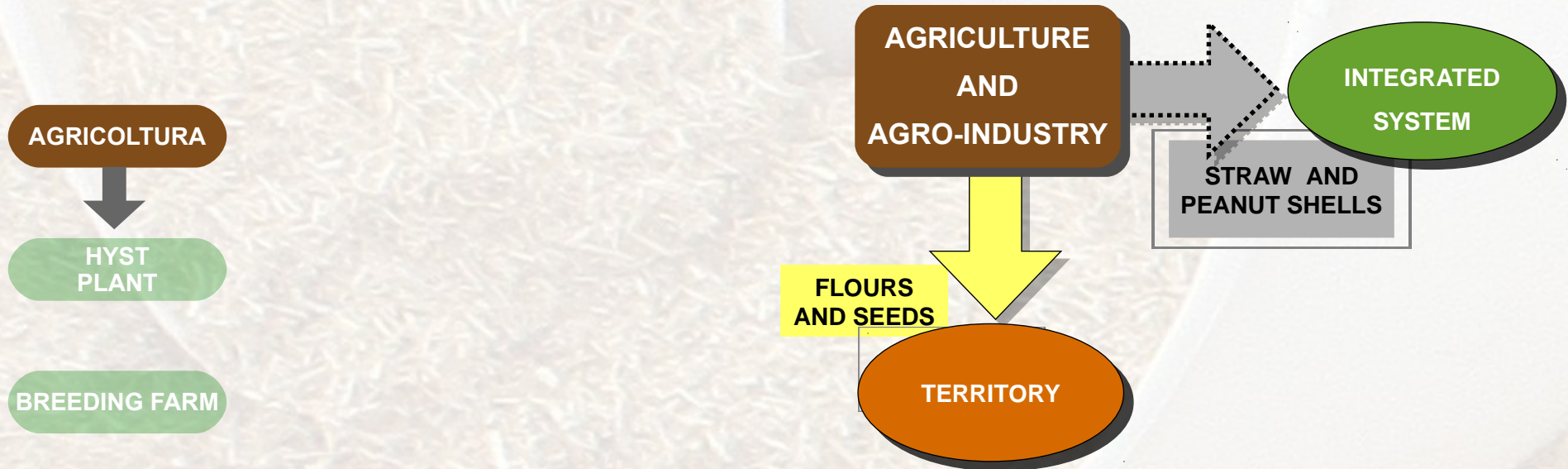


HYST: INTEGRATED SYSTEM





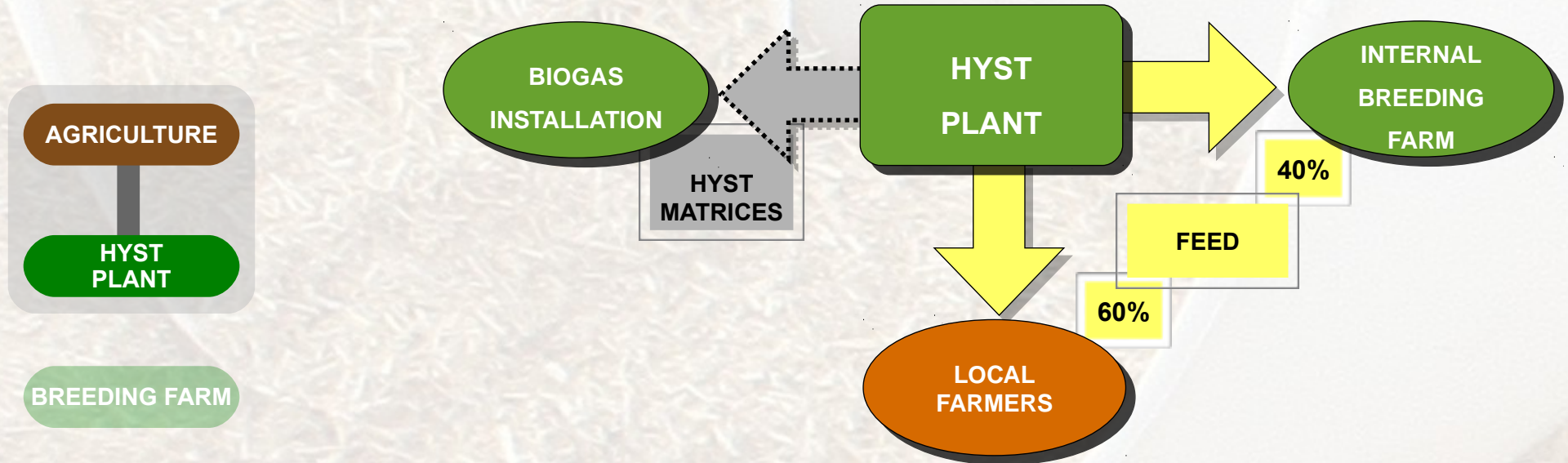
HYST: INTEGRATED SYSTEM



Biomass required: 6,500 t/year of agricultural waste.
Area of biomass collection: within a radius of about 10 km.
Animal feed supplements: 800 t/year (corn and cottonseed meal).



HYST: INTEGRATED SYSTEM

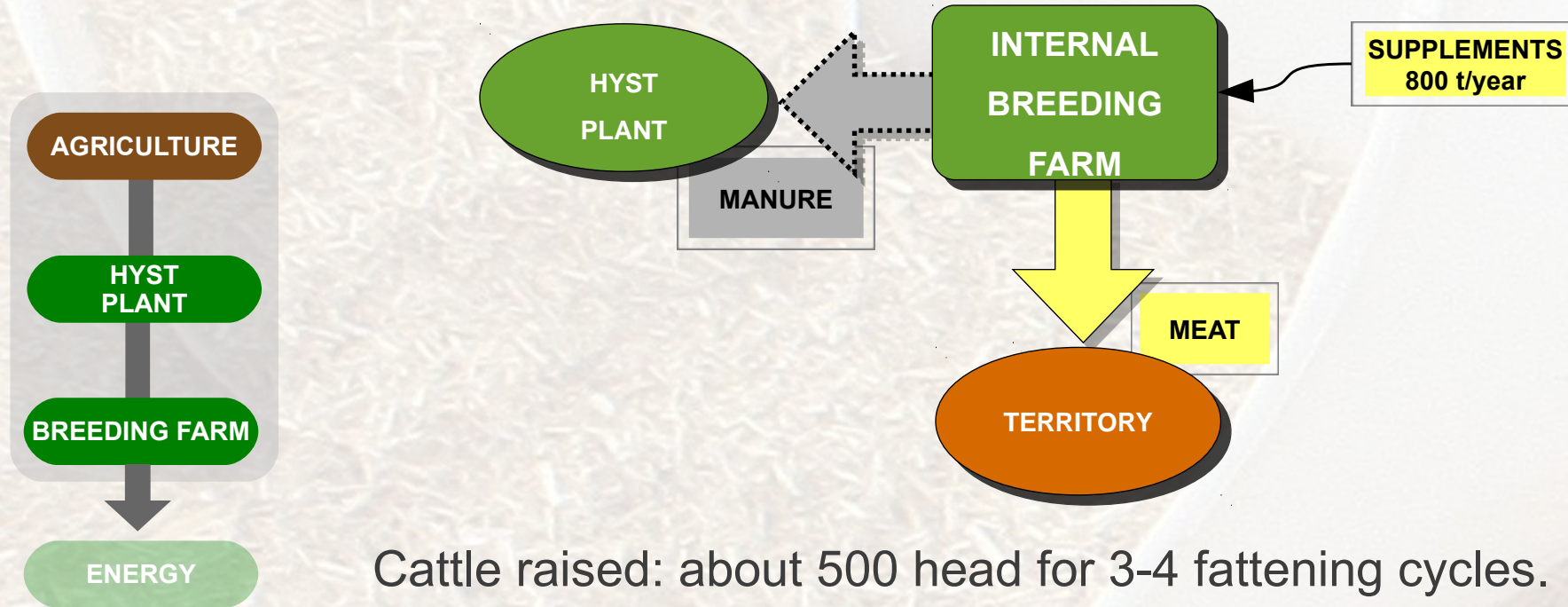


Processing the same biomass waste, the Hyst plant obtains feedstuffs for livestock and matrices for the production of biogas:

- 40% of the feed will be used in the internal breeding farm;
- the remaining 60%, over 2,500 tons, will be available to local farmers enabling them to feed about 850 head of cattle during the dry season.



HYST: INTEGRATED PROJECT



Cattle raised: about 500 head for 3-4 fattening cycles.

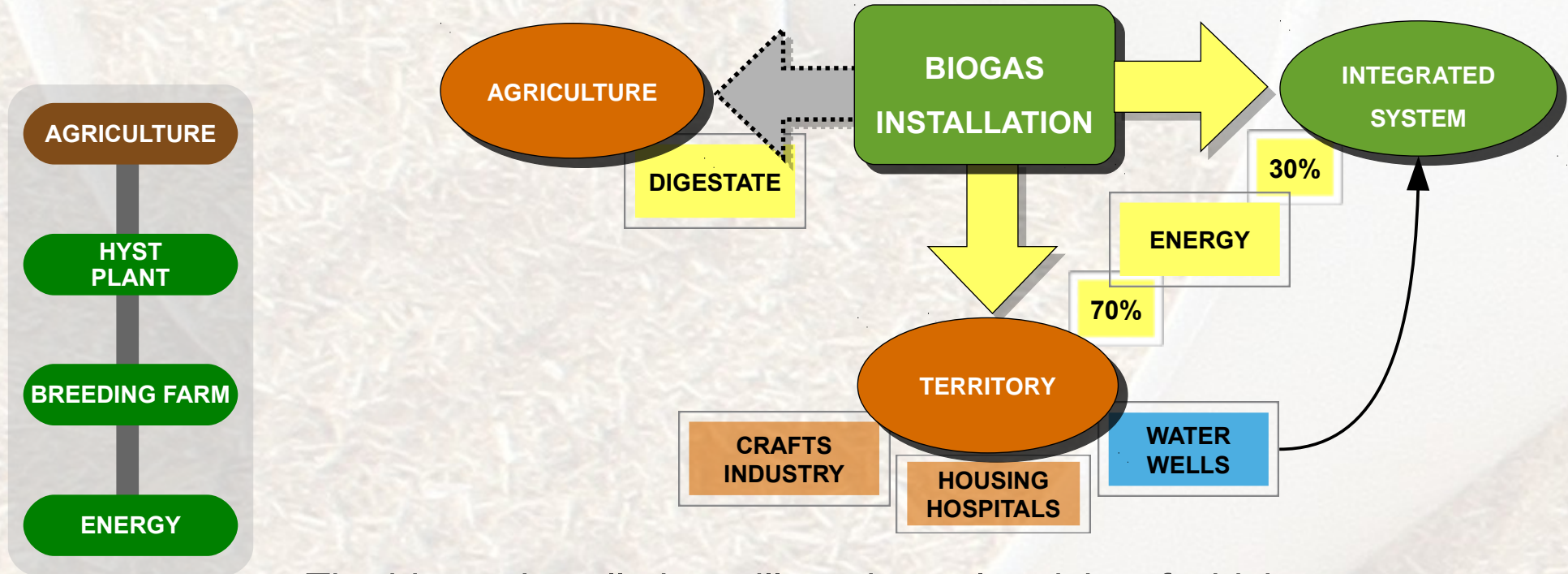
Meat production: 400 tons/year of live weight.

Animal manure will be allocated to the biogas installation.

Availability of feed throughout the year ensures significant benefits also to farmers of the area.



HYST: INTEGRATED SYSTEM



The biogas installation will produce electricity of which:

- 30% will be needed to power the entire plant itself
- 70%, about 1.9 mln. kWh, will meet the needs of 2,000 families.

The approximately 3,000 tons/year of digestate will be used as a natural fertilizer to restore the organic matter content of cultivated land.



HYST: THE PHILOSOPHY OF THE PROJECT

Identify issues and create the synergies to implement stable solutions for the well-being of the population.

Sustainability is achieved by placing at its center a broader view of the human being, integrated in an environment of which one is consciously both a functional part and an evolutionary synthesis.

