

In Alter we create projects that generate the integration of biogas plants on farms, food industries and management of organic waste, generating the following benefits.

1. The integration of biogas plants on farms, food industries and management of organic waste creates a closed-loop economy, neutral as to the balance of CO₂ emissions, which are recovered and reused nitrogen fertilizers, phosphate, potassium and micronutrients, plus an excess of renewable energy that can be sold to other consumers is generated. Thus, these farms increase their competitiveness and are less exposed to the risks of supply of the raw material and energy costs.
2. The economic viability of rural areas is increased. Jobs and local wealth is generated. Instead of simply managing organic waste, energy is produced and nutrients are used in accordance with a closed cycle economy. Ranchers and farmers using, eg, as co-substrates organic waste from municipalities, can branch out and take on a new socio-economic function in rural areas.
3. One of the most important environmental benefits of a biogas plant is the reduction of emissions of greenhouse gases, particularly methane (CH₄), nitrous oxide (N₂O gas is reduced on the ground, also classified as gas that damages the ozone layer) and carbon dioxide (CO₂). It is issued only to the atmosphere the CO₂ previously absorbed by plants. Avoiding the emission into the atmosphere of methane, a greenhouse effect 30 times greater than CO₂, and nitrous oxide, a 298 times higher CO₂ greenhouse.
4. The emission into the atmosphere of harmful compound ammonia (NH₃) high volatility and ammonium (NH₄⁺, nonvolatile) is reduced. Contributes to reducing consumption of natural resources such as oil and phosphate.
5. The value of organic waste by anaerobic treatment is improved. Odors are reduced, due to the severe degradation of volatile odorous substances, such as fatty acids and phenols. In the digestion process fluid digested for easy pumping it is achieved and an even field distribution biofertilizer is achieved.
6. The digested organic waste, as e.g. the slurry is best fertilizer not digested by the transformation of organic compounds (fats, proteins, carbohydrates) methane, nutrients (N, P, K) to more available forms for plants mineralize (nitrogen ammonia) and the C / N is reduced. Therefore it can be used as quick-acting fertilizer found in plants during growth, reducing the risk of leaching of nitrogen compounds in the presence of rain. Applied to the leaf of the plant it strengthens and increases its resistance to parasites. In the digestion process are not lost micronutrients and lignin, which in turn is important for the formation of humus in the soil is maintained.

7. The process reduces the number of digestion (particularly coliforms and Salmonella) pathogens. Because a partial sanitizing, the digestion process in the germination capacity of weeds is reduced. A temperature in the mesophilic digestion process (35 to 37oC) is sufficient to stop the germination capacity of the seeds of most the weeds. Thermophilic temperatures (52-55oC) in the digesters provide security against the spread of weed seeds.
8. It saves on the use of amendments to the field as well as antiparasitic products. The fertilizer produced in the biogas plant can effectively replace mineral fertilizers and protect the aquifers.
9. The development and distribution of technologies with a high degree of innovation and respect the environment is encouraged.
10. By means of a motor-generator and waste heat reuse of electrical and thermal energy is generated. Additional income from the sale of electricity and the use of waste heat (for heating, cooling and domestic hot water) or sale (eg process heat for industries, district heating developments, etc.) are received.
11. The sustainable management of farms improves the brand image of the company.
12. The removal of nitrate leached into the aquifer increases legal certainty of farms facing the slogan own risk Environmental Law "polluter pays".
13. Multiple factors improve labor safety and hygiene in organic waste management over other routes of administration.