Synthesis

Biogaz reservoirs work with human and animal waste, particularly pig litter. These waste products are collected in a digestion tank and produce methane gas.

After a year, the fertilizer can be removed from the digestion tank. This fertilizer contains fewer nitrates.

Objective:

The Biogas system is a means of managing organic waste products, and making use of them in the form of methane gas for lighting and cooking (which considerably reduces the purchase of coal, which is highly pollutant, and at the same time reduces the collection of wood in areas that have already suffered forest clearing); the residue can also be used as a natural fertilizer. Lastly, it improves the hygiene of homes and courtyards.

Methodology:
The biogas tank is buried and latrines are built on the roof, for insulation purposes (anaerobic bacteria digest optimally at a constant temperature of 37°C).

The performance of the system is enhanced by:
- The presence of latrines connected directly to the digestion tank,
- The construction of animal pens (mainly for pigs) - on the roof of the biogas tank – not only improves sanitation, but also provides additional insulation, thereby improving gas production.

On a secondary level, it would be advantageous to grow animal food crops, as keeping animals in pens requires fodder. Alfalfa is recognized for its nutritious properties; it lives for more than ten years, and is cut for use. In addition, the roots can grow up to 4 metres in depth, and so if planted in 50cm strips along the edge of terraces, it can effectively consolidate them and prevent erosion.

**A few figures**

2 pigs and 5 people provide enough organic waste to supply the digestion tank.

Savings achieved amount to 100 to 200 euros a year

The gas produced provides 4 to 5 hours lighting and gas for cooking per day.