Biogas plant for OSAD

July 2018

Biogas plant for Optimum Solids Anaerobic Digestion (OSAD)

Biogas plant BioTransForm (BTF) that use G&G-system (Gas & Gödsel/fertilizer)

Control system

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Food waste and human waste for production of biogas and biofertilizers

Wet material i.e. food waste and human waste is to be transported to biogas plant packed in plastic-like biomaterial (see example in Figure 1) weighed and milled, then moved to mixer where it blends with well-ground dry materials that have been weighed into the correct proportion to optimize the process.
The dry materials should be in stock while the wet materials will be collected in a suitable schedule.
To eliminate unhealthy odors containing aerosols, these are led to bio-filters containing suitable dry well-ground organic materials that should be replaced as needed and then included in the process.
--- If anyone is interested, I can explain all the details.

Bioenergy is the most important energy for living organisms because it is the solar radiation energy captured during photosynthesis and stored together with the plant nutrients in food, feed and fiber. Everything in residues and waste that comes from the plant and animal kingdoms can be transformed by microorganisms into energy-rich methane in the biogas and the residual bioenergy is left in the biofertilizers containing all essential chemical elements H, C, O, Ca, Mg, S, Cl, Fe, B, Mn, Zn, Cu, Mo and stimulating elements Co, Cr, Ni, V, Sn, Li, F, Se, Si, etc., in partly transformed organic materials and in microorganisms. Biofertilizers should phase out chemical fertilizers and other agrochemicals.

Citizens want to do right and therefore easy and hygienic collection of food waste and human waste without losses that pollutes must be introduced. CFWbas (*Collecting Food Waste bas*) and CCbas (*Collecting Closet bas*) will prevent the loss of bioenergy and plant nutrients and allow hygienic work environment for all the people involved – in households, during transport and in the biogas plant.

Mobile or stationary local biogas plants that are small or large, can only be profitable when technology, including logistics, is focused on minimizing polluting losses and creating a hygienic working environment by using high technology for those who collect waste and for those who work in biogas plants.

There are still no facts showing how much of bioenergy from material that comes from the plant and animal kingdoms is transferred to methane in the biogas and how much remains in the biofertilizers and is important for soil organisms that help plants to get plant nutrients. To increase sustainable management of waste and water and minimize losses of bioenergy and plant nutrients, there must be made radical transformation of the current systems. **Sustainable farming and production of healthy food is not possible without sustainable biofertilizers.**

Figure 1. Food waste and human waste will be sealed to hygienically and without polluting losses transported to biogas plant.

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