Introducción

Hi, I'm Georgius and I'd like to give you a brief presentation about secondary management of pig slurry. You feel free to interrupt me if you have any questions during my presentation but I prefer to answer them at the end. Okay?

Primera diapositiva

Before we get going to the process we know that our pig farm has one thousand of breeding sows.

The production of slurry flows is very big, for this reason, the accumulation could have negative effects, and in this presentation I will provide various solutions, we have to think about.

Segunda diapositiva, el tanque

The best solution for us is the biodigester, what we will see it step by step. Let's now look at the pre-storage tank. The pre-storage tank is the receptor, that keeps a constant flow in the biodigester.

Here, the liquid slurry is processed to prepare it to enter the biodigester.

tercera diapositiva, el biodigester

The anaerobic digester is the heart of system. This process is very similar to what happens inside a cow's stomach.

Cuarta diapositiva, storage

In the absence of oxigen, bacteria from the manure breaks down the organic matter and converts it to biogas. The digester is continuously stirred using submersible mixers in the anaerobic digester.

Quinta diapostiva, biogas

The resulting biogas is stored above the digestate in a floating gas membrane.

Sexta diapositiva, producción eléctrica

The biogas is combined heat and power unit. In the CHP the biogas is incinerated to produce electricity and heat for warm the farm.

Furthermore, to make the process more efficent, the heated fluid is circulated through the coils, this coil gives part of heat to biodigester stimulating bacteria.

Despues de la broma

Septima Digestate

All in all we have a digestate, the fraction unfit for process. In addition to biogas, the anaerobic digester produces digestate as an end-product. Digestate is a high-value fertilizer that can be used for land application.