CATEGORY 1 PROCESSING PLANT PRODUCTION PROCESS –

1. Raw section

Category 1 meat by-products enter the Category 1 intermediate plant, known as the "C.1 raw yard", where they are offloaded into a watertight hopper. They are then transported to the shredder, where they are reduced to a particle size of less than 30 mm. A piston pump transports the shredded raw material to the feeder expansion hopper. Applying the Method 4 of the Regulation for the Animal by-products category 1 transformation, GESUGA has designed this plant with a capacity of 20.000 kilos production per hour.

2. Cooking, dehydration and sterilization section

Sterilization in Category 1 continuous biodigesters is carried out at atmospheric pressure and at a temperature of:

- 100ºC for 61.75 min
- 110ºC for 46.31 min
- 120ºC for 38.60 min
- 130ºC for 15.43 min

The by-products are cooked in fat, a process that evaporizes the water the by-products contain. The extracted water, in the form of steam, is transported to the thermal oxidation system. The digester produces **pig cracklings** and **fat**.

3. Press section

The pig cracklings are pressed side-by-side to extract as much fat as possible. A rotating drum separates fats and fines. The fines are returned to the pressing process via a press feed tank, and the fat is sent to the expansion tank, where it will be processed.

5. Mill and storage section

The meal is transported by a conveyor belt from the press to the mill feed mixer and from there to the hammer mill. The meal is then transported to the storage hopper and subsequently loaded onto trucks in bulk after marking with GTH using an injection system, and then shipped to authorized agents: **cement companies.**

6. Fat section

The fat collected in the extension tank goes through two separation processes, first via two centrifugal decanters and the second via a vertical centrifuge that mixes fat and water for an impurity content that does not exceed 0.15% by weight. The fat sets for 24 hours in a decanting tank before final storage.

It can then be used as either a **BIOFUEL** for our own transformation process, or sent to **AUTHORIZED AGENTS** after being sterilized during 20 minutes, at 3 pressure bars and over 133ºC of temperature and, later on, being marked with GTH.

7. Thermal oxidation

Throughout the manufacturing process, gases and water vapors are released and must be treated before they are released into the atmosphere. The gas and vapor purification processed employed in the plant uses the thermal oxidation of gaseous effluents at a temperature of 850°C for 2 seconds. The thermal oxidation process is followed by a thermal recovery boiler, which supplies steam to the entire manufacturing process.

8. Wastewater treatment

Finally, all wastewater generated inside the plant will be stored in a tank before being incorporated into the transformation process via the sterilizer, where it will evaporate. It is, therefore, a plant with **zero discharges** in regards to water generated by the manufacturing process and the first wash for vehicles and container cleaning and disinfection.

Any remaining industrial wastewater is sent to the wastewater treatment plant. Industrial wastewater is generated from the washing center for the trucks and is later added to the wastewater from the bathrooms and dressing rooms.

GESTORA DE SUBPRODUCTOS DE GALICIA, S. L.

Lg. Areosa, s/n. 15186 Queixas.
Cerceda A Coruña
Tfno.:981.68.81.81 Fax:981.68.81.80

A sustainable approach for the benefit of society