

## TRAINING MATERIAL

### Title:

Digestate from the co-digestion of vegetable oils waste and pig manure by "VALUVOIL" process (ID:268)

### Training:

#### What is the product?

Digestate obtained from vegetable oils waste and pig manure

#### Who is the vendor of the product?

Fundación CARTIF.

CARTIF is a horizontal, private and non-profit technology center. Its mission is to offer innovative solutions to companies to improve their processes, systems and products, improving their competitiveness and creating new business opportunities.

CARTIF develops R&D projects, directly funded by companies or public funds raised through competitive calls for national and international level. CARTIF also advises public authorities (municipalities and regional governments) in the planning and development of innovative projects with high economic returns.

#### Which other products are provided by the vendor?

Microalgae based biofertilisers from wastewater by heterotrophic microalgae process.

Pelletized digestate from mixture of pig manure, poultry manure and straw by "MIX-FERTILIZER" process.

Struvite from digestate and Manure by "REVAWASTE" process.

#### Which are the advantages of the product and the problems addressed?

Currently, the objective of digestate processing is to produce a standardized biofertilizer (solid or liquid), where the quality and marketability of the anaerobic digestion residue is improved. However, digestate processing can also be approached from the point of view of digestate treatment. This approach is similar to wastewater treatment, where nutrients and organic matter from the effluent are removed to allow discharge to the sewer system or wastewater treatment plant.

What makes digestate an interesting product is its excellent quality as a plant fertilizer, based on a rich macronutrient content for plants including nitrogen, phosphorus, potassium and sulfur, various micronutrients as well as organic matter (Figure 1).

#### Which is the nutrient content of the product?

N-P-K (%): 0.09-0.2-0

### **Which equipment and methods can be used to apply the product?**

The product is presented as liquid solution (Figure 1). Digestate can be fertirrigated with traditional agricultural machinery.

### **How to use the product?**

Dosage: 40-80 m<sup>3</sup>/ha

Cultivation methods: open field or greenhouse

Recommended crops permanent grassland, cereals for the production of grain, root crops and plants harvested green from arable land by area. It is recommended to avoid the application of digestate in periods with low plant uptake or high rainfall.

### **Which are the authority permits and in which EU countries?**

Digestate is proposed in the revision of the Fertiliser Regulation by the European Commission to try to harmonize its composition, its origin, its process of obtaining, allowing all this to be marketed as fertilizer.

### **How much does it cost?**

The cost of manufacturing the product depend on the amount of oil waste and pig manure treated.



Figure 1. Digestate from VALUVOIL process

For more information: [https://nutriman.net/farmer-platform/product/id\\_268](https://nutriman.net/farmer-platform/product/id_268)