

Digestate Information Sheets No.1 – Introduction to Digestate



Digestate is a by-product of an anaerobic digestion system that produces gas for heat and power production. The digestate produced is a useful fertiliser and soil conditioner that will supply nutrients and organic matter.

Digestate can be obtained in three forms, separated liquid (dry matter should be less than 4 %), separated solid (dry matter should be greater than 20%) and whole unseparated digestate (dry matter should be between 4 and 7%). It is important that when getting digestate that it is in a form that can either pumped with a tanker without creating blockages or can be stacked in a heap that does not slump. If the material does not meet these criteria do NOT accept it as it will cause problems in storage and spreading.

The plant nutrients contained in digestate consist of Nitrogen, Phosphate and Potash (N, P and K), Secondary nutrients such as Magnesium, Calcium and Sulphur (Mg, Ca and S) and Micronutrients Copper and Zinc (Cu and Zn) are presents may not be commercially valuable.

How rich the digestate is in nutrients will depend on the feedstock from which it has been made. Digestate from human food waste will be higher in plant nutrients than those created from, animal wastes, crop material, distillery by-products and other organic industrial by-products.

The variability in organic feed products cause Digestate to have a **Variable Nutrient Content and therefore a different economic value**, it is therefore essential that prior to taking Digestate on to the farm that a up to date nutrient analysis has been obtained.

Once Digestate is on the farm it is the land managers responsibility to make sure it is used appropriately.

- The supplier should provide analysis results, and this must contain the following information
PAS110 compliance statement
- Dry matter content,
- Total nutrient content for N, P, K, S, Mg, Ca,
- Readily Available Nitrogen (RAN) content,
- Potentially toxic elements (PTE's),
- Physical contaminants e.g. plastic, glass, metals etc.,

In addition, the following analyses can be of benefit

- pH
- neutralising value (NV) (liming potential)
- specific trace elements
- conductivity
- C:N ratio (potential N lock-up)

The most important thing is that any Digestate used on farmland must meet the specific requirements of SEPA and the NVZ regulations relevant to the area it is being spread. A decision tree has been created to assist making sure meets these and the land managers requirements Guide to **Using Anaerobic Digestates on Farms in Scotland**

Farmers and land managers need also to be aware of the requirements of their Assurance Schemes as all will have specific requirements for the use of Digestate in the production cycle for crops or livestock being sold under that scheme. **Failing to meet the requirements of the relevant Assurance Scheme may result in temporary or permanent removal from the scheme.**