



## Dairy Ingredients Ireland Organic Sludge Fertilizer



# Organic Sludge Fertilizer



- Glanbia Dairy Ingredients Ireland processing facility at Ballyragget, Co. Kilkenny is the largest integrated dairy ingredients processor in Europe.
- The milk water washings from the plant are treated through membranes and results in water and a solid dairy sludge fraction.
- This sludge fraction is essentially made up from the solid nutrients found in milk and as such is a nutrient rich material.
- In the following slides we will explain briefly about our company and the treatment process that allows the sludge to be collected, as well as showing you the benefits of the Glanbia sludge.

# Dairy Ingredients Ireland

Dairy Ingredients is the biggest business of its type in the country. It employs approximately 470 people at two large-scale processing facilities including one of the largest integrated dairy sites in Europe, which processes 40% of the Irish milk pool and 25% of the Irish whey pool.

This business unit is a leading Irish supplier of lactose and other whey proteins to the three largest infant formula manufacturers in the world. It is also Ireland's largest manufacturer of casein, a form of milk protein, and of cheddar cheese.

Further information about Glanbia can be found at our website [www.glanbia.ie](http://www.glanbia.ie)



# Waste Water Treatment

## Dairy Ingredients Process Inputs

- Milk
- Whey
- Water

## Outputs

- Waste water from washings that after treatment in the Kubota membranes results in
  - A liquid fraction - water returned to the river
  - A nutrient rich solids fraction - Sludge



# Waste Water Treatment Results in

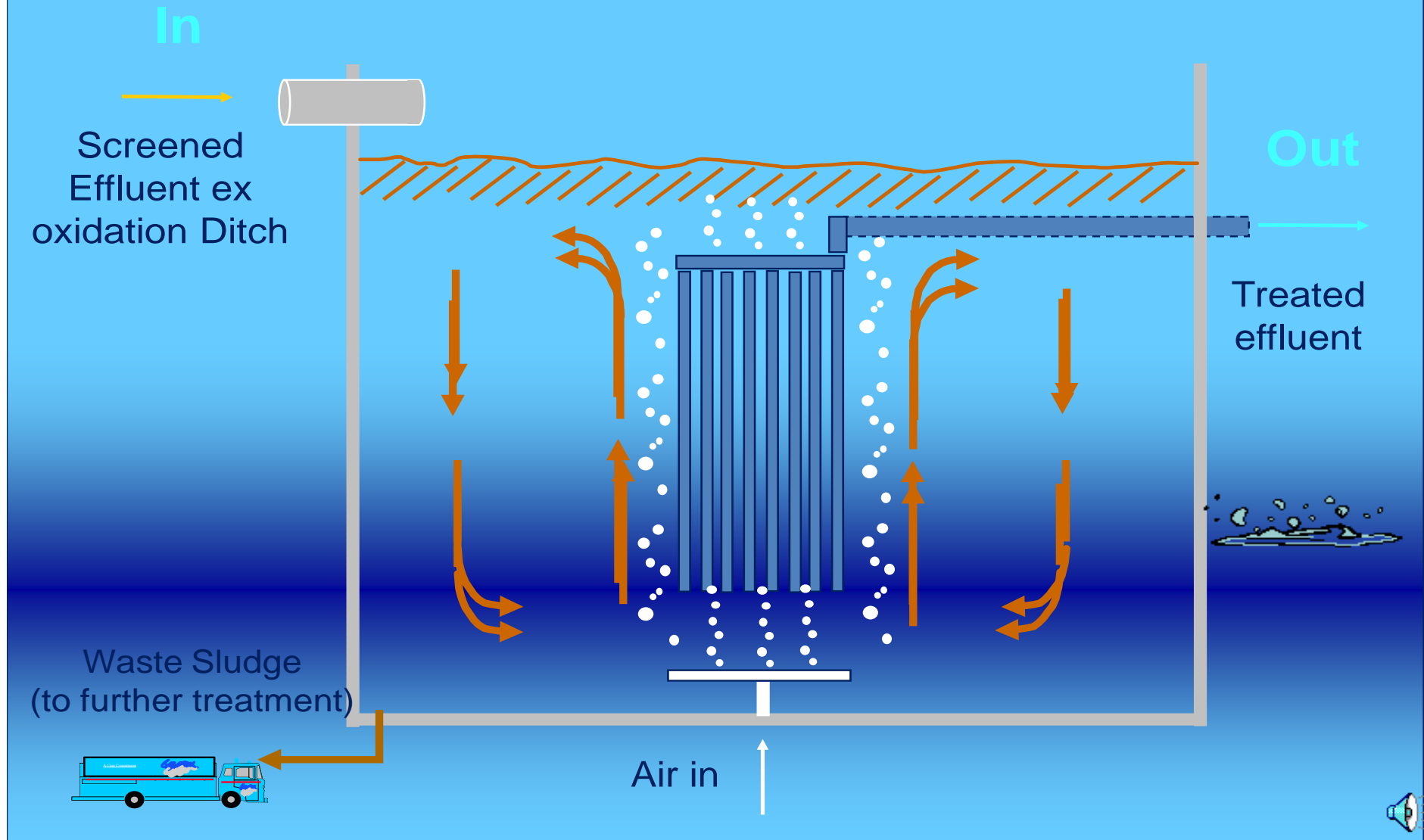


1. Discharge to waters -  
to the River Nore



2. Sludge - a nutrient  
rich, natural fertiliser

# Principle of Kubota Membrane Operation



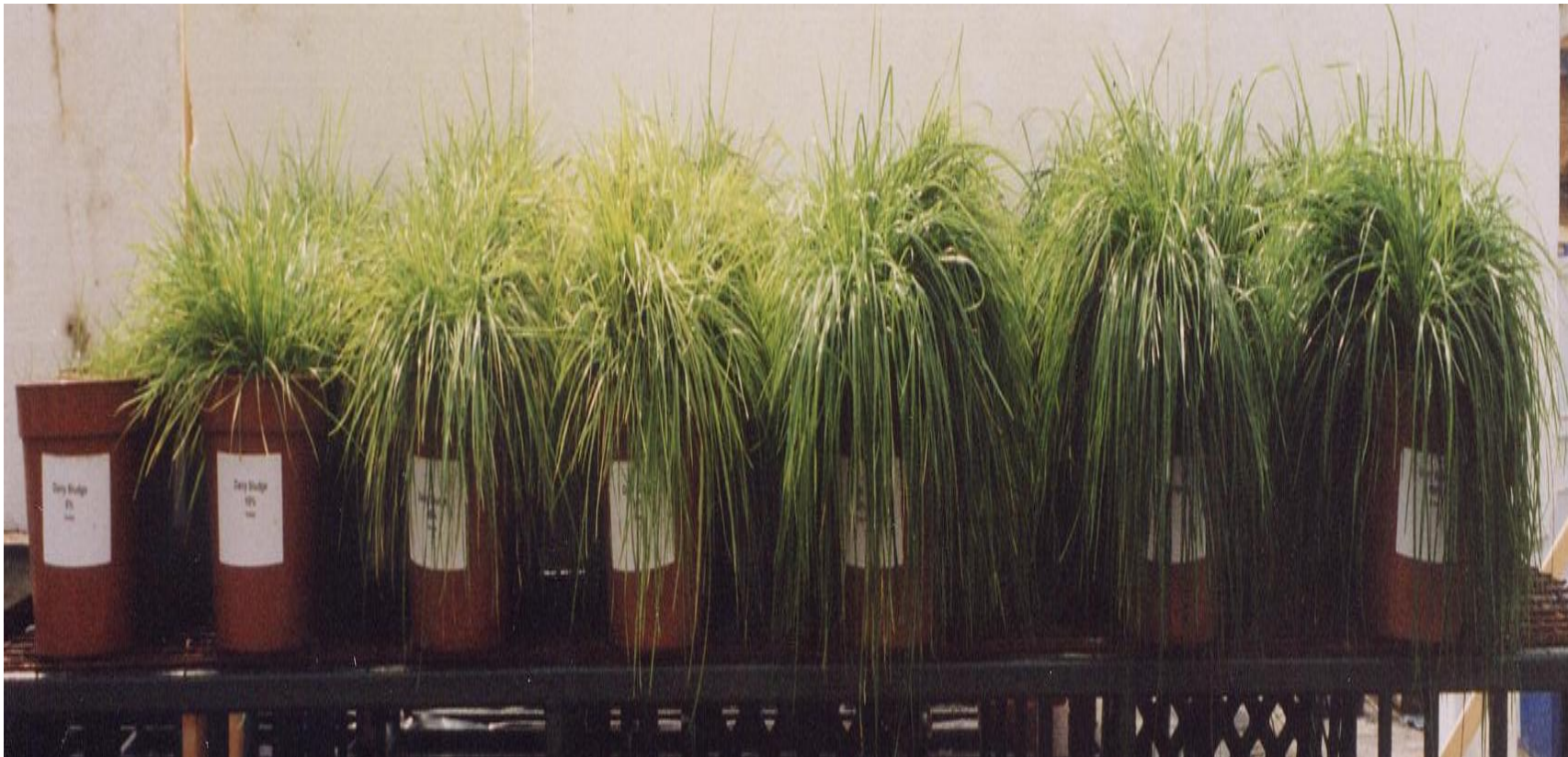
# Growth after Dairy Sludge Application

- 4 weeks



# Growth after Dairy Sludge Application

- 12 weeks



# Growth after Dairy Sludge Application Marigolds Day 101



## Sludge Nutrient Values

Average dairy sludge nutrient values at 15.3% dry matter are:

- **N – 10.5 kg N/T**
- **P – 5.3 kg P/T**
- **K – 1.2 kg K/T**

Phosphorus is generally the limiting factor for the application of dairy sludge, and a farm receiving its full allocation of dairy sludge fertilizer, as per the NMP, will receive the total amount of phosphorus required for the land – meaning that the purchase of additional chemical P fertilizer is not required.

## Sludge Nutrient Values

A strict code of practice is upheld for the spreading of organic dairy sludge fertilizer once the Nutrient Management Plan has been approved by the EPA.

Landspreading of Organic Dairy Fertilizer shall not take place:

- On wet/waterlogged ground
- On frozen or snow covered ground
- Where gradients are in excess of 18%
- On fields displaying cracks over pipe or mole drains
- During periods when the application of fertilisers to land is prohibited (as per S.I. 610 of 2010)
- When there is a risk of causing odour nuisance to the public (e.g. Sundays or public holidays)
- Outside daylight hours



- Should you require further information please contact Órla Healy or Audrey O'Shea
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# Dairy Ingredients Ireland (DII)

