

TRAINING MATERIAL

Title:

Struvite from wastewater by "PHORWater" process (ID:208)

Training:

What is the product?

Struvite ($\text{MgNH}_4\text{PO}_4 \cdot 6\text{H}_2\text{O}$) is a high-quality crystalline salt recovered from wastewater treatment plants.

Its slow-release fertilizer property makes it very suitable for a top-dressing application.

Who is the vendor of the product/technology?

DAM - Depuración de Aguas del Mediterráneo.

DAM is a Spanish company with 25 years of experience on wastewater treatment plants operation, maintenance and management. With long experience on nutrient recovery, DAM has developed an integral model for phosphorus recovery and reuse from urban wastewater.

Which other product/technologies are provided by the vendor?

PHORWater struvite recovery process_207 (https://nutriman.net/farmer-platform/technology/id_207)

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

Due to its genuine slow release property, nutrients are efficiently used by crops because it meets nutritional demands of crops in a better way and prevents the burning of plant roots, even when applied in excess quantities. Struvite guarantees a slow but steady nutrient supply and reduces nutrients runoff.

Cd has not been detected and the amount of organic matter is very low, (TOC is lower than 0.8%), so it is a secure environmentally friendly product.

Which is the nutrient content of the product?

5 N%, 29 P_2O_5 %, <1,0 K_2O %, 9%Mg

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

The product is very suitable for top-dressing application and can be easily combined with other solid fertilizers but, it can also be dissolved in a slightly acidic solution. Therefore, traditional agricultural machinery can be used.

How to use the product?

Struvite is easy to handle and has not specific storage requirement. The application dose is 1.000 kg of struvite per hectare. It can be applied on cereals for the production of grain, wheat and spelt, rye and winter cereal, barley, oats and spring cereal, grain maize and corncob, root crops and plants harvested green from arable land by area, dry pulses and protein crops, permanent grassland.

It is recommended to be applied before sowing, in combination with urea and potassium.

Which are the authority permits and in which EU countries?

It is accepted as fertilizer in the UK, Germany and the Netherlands but, the local end-of-waste regulation limits its use as biofertilizer in some European countries. Complies with the EU Fertilizer Regulation which shall apply from 16 July 2022.

How much does it cost?

Price range is estimated to be between 200-260 €/ha



Struvite from wastewater by "PHORWater" process and land application.

For more information: https://nutriman.net/farmer-platform/product/id_208