

TRAINING MATERIALS

Title:

Ammonium sulphate from co-digestion of corn silage, chicken manure and other biowaste by BENAS process

Training:

What is the product?

The ammonium sulphate solution (25% AmS) is a marketable nitrogen and sulphur fertilizer from digestates by BENAS biogas plant using a modified stripping process

Who is the vendor of the product?

The vendor of the product--the GNS Company was founded in 1998 at the initiative of the Society for Ecological Utilization of Materials (FÖST e.V.) to conduct research on practical technologies for improving the sustainable utilization of natural materials.

The highly qualified management and staff provide years of experience in a wide variety of applications. Together with partner companies, GNS offers full proficiency for complex tasks, ranging from scientific proposals and technological development to the supervision of project implementation.

Which other product are provided by the vendor?

https://nutriman.net/farmer-platform/technology/id_668

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

The recovered AmS solution is a marketable fertiliser for closing fertilizer loops. The neutral pH in the AmS solution is well tolerated by plants. The high concentration of 25% avoids evaporative crystallization, making it a suitable for direct application on crops. The product can be used for producing mineral fertilizer solutions or for upgrading manure or digestate low in N content. The recovery of N reduces emission of ammonia, nitrate and nitrous oxide from digestates.

Which is the nutrient content of the product?

%N, %P₂O₅, %K₂O, %other nutrients, kind of nutrient release.

The AmS solution is a liquid fertiliser with neutral pH at 7,5. It is rich in plant available N (NH₄-N 48-57 g/kg) and S (56-65 g/kg) as added value to meet the specific requirements of some crops.

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

In order to reduce the risk of emission during application, it is recommended to apply the AmS solution via injection or immediately incorporated into soil after surface application.

How to use the product?

This product can be applied to all crops in need of nitrogen and especially those sulphur demanded. The recommended dosage will depend more on the sulphur requirements of crops.

Which are the authority permits and in which EU countries?

This product is authorized by German fertilizer regulation.

How much does it cost?

The price for the product is 300 €/kg N.



Picture of the ammonium sulphate solution (left) and solid calcium carbonate fertilizer (right)

For more information: https://nutriman.net/farmer-platform/product/id_667