

EIP-AGRI practice abstract

Short title:

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

Summary:

Two products have been mixed together with a nitrification inhibitor, to provide a new type of fertilizer, with a double organic/inorganic base and gradual nitrogen release, that has been tested in field trials on barley crops.

This new type of fertilizer shows a number of advantages among current marketed products, both environmental (improving soil quality, minimizing nitrogen losses through leaching of nitrates, reducing GHG emissions) and economical (cost reduction by a single application and increase in production yields). Barley field trials demonstrated that the new organic fertilizers improved average production by up to 10 % compared to traditional mineral fertilizers. Soil samples (78 % of total samples) also showed an improvement in the percentage of organic matter compared to control plots with traditional mineral fertilization.

The input materials are digestate of pig manure, chicken manure from poultry farm, and straw (residual vegetal biomass), NaOH, H₂SO₄, (NH₄)₂SO₄, urea. The N-P-K rate in the output product is 10/4/4. Its appearance is in the form of pellet of 4 mm diameter. Metals are below the limits of its classification.

The price of the product is 400-500 €/t

Three field trial plots (1 ha total) were sown with short-cycle barley with a dose of 300-1,000 kg/ha.

For more information: https://nutriman.net/farmer-platform/product/id_267