

Organic soil improver from calves manure by “Geamix” separation at source



Keywords: • Separation at source • Solid • Organic matter • Soil improver •

Key facts:

- **Product Category:** PFC3A organic soil improver
- **Input material:** Raw manure from calves
- **General appearance:** solid fines
- **Nutrient Content (N-P2O5-K2O):** 13 – 9,4 – 8 2 g/kg
- **Product market status:** advanced development stage
- **Limitation of application:** Currently max 170 kg N/ha as livestock manure (230-250 kg N/ha for derogation farms in NL)
- **MS Authority permit availability:** not applicable
- **Geographical area:** The Netherlands
- **Product price:** €30/ton ex works



Summary:

The soil improver is produced by separation at source of solid manure and urine. The calves stay on a steel slatted coated floor. The manure falls through the slatted floor on a perforated, urine permeable manure belt that lies under the grid floor. The urine falls completely through the perforated manure belt.

The solid manure contains 40 % dry matter due to the direct way of separating. Almost no energy is needed to achieve this percentage (only electricity costs for running the manure belt).

For the further processing of the solid fraction, a device is being developed that adds quicklime to the manure and further dries the manure with stable air (on a belt dryer) and then crumbles it. This creates an exportable crumb with a high dry matter percentage. This high-quality soil improver can be sold both regionally and internationally (because it is hygienic). The product can be applied before sowing or planting of the crops with the same machines which are now being used for spreading solid manure. The fertilizer can be used at the cost of approximately €30/ton ex works. The product can be pelletized for easier handling and spreading (optional).

How to use:

- **Type of farming:** low input, conventional
- **Cultivation method:** open field
- **Recommended crops:** grassland, arable crops, horticulture
- **Application doses :** Depends on crop application rates. Currently max 170 kg N/ha as livestock manure (230-250 kg N/ha for derogation farms in NL)

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Key product features:

- Solid organic soil improver
- Dry matter: 818 g/kg
- Organic matter: 535 g/kg
- N: 13 g/kg
- P2O5: 9,4 g/kg
- K2O: 8,2 g/kg
- C/N: 23
- Organic soil improver is a natural product. Agronomic values may vary slightly. The average values were

Key product benefits:

- Natural product
- High organic matter content
- High C/N ratio
- Contains natural trace elements
- Hygienic, free from pathogens

Competitive position and advantages:

Separation at source prevents the emission of ammonia from the housing system.

The separated solid manure has a natural high C/N ratio.

The product can be pelletized for easier handling and spreading (optional).