

## Mineral concentrate from pig/cattle slurry using belt press sieve and reverse osmosis processing



*Keywords: Mineralconcentrate • Liquid • RENURE • Nitrogen • Potassium*

### Key facts:

- **Product Category:** Mineral concentrate from livestock manure
- **Input material:** slurry/manure from pigs and cattle
- **General appearance:** Liquid
- **Nutrient Content (N-P-K):** N 6,5; P<sub>2</sub>O<sub>5</sub> 0,1; K<sub>2</sub>O 7,5 kg/ton
- **Product market status:** Available on the market
- **Limitation of application:** Currently max 170 kg N/ha as livestock manure (230-250 kg N/ha for derogation dairy farms in NL), pilot RENURE fertilizer in NL
- **MS Authority permit availability:** NL-219144
- **Geographical area:** Netherlands, North-Brabant, Northern Limburg
- **Product price:** between -/- €5 and €0 per ton



### Summary:

Vlako processes slurry from 95% pigs and 5% cattle or mink to produce the mineral concentrate. The slurry is separated in a solid and liquid fraction using a belt press sieve. The solid fraction is pasteurized and exported. By processing the liquid fraction with reverse osmosis, the mineral concentrate is separated from clean water. The clean water is used for sub-surface drainage irrigation. The mineral concentrate from Vlako is liquid and contains on average between 5 to 9,5 N, 0,1 P<sub>2</sub>O<sub>5</sub> and between 6 to 11 K<sub>2</sub>O kg/ton.

The mineral concentrate can be used in grass fields, silage maize, potatoes and vegetables. The product can be applied before sowing or planting of the crops with the same machines which are now being used for spreading slurry or liquid manure. During the cultivation of the crops the product can be applied with precision fertilising equipment. The use of low emission application techniques is compulsory to prevent ammonia volatilization.

The product is allowed as pilot RENURE fertilizer in NL which means that application is no longer defined as livestock manure in the Nitrates Directive. The mineral concentrate can replace the conventionally used chemical fertilisers. The product has fast working nitrogen, which is almost entirely used, which means less leaching of nutrients compared to unprocessed manure. Mineral concentrate is made from Dutch manure and contributes to closing agricultural nutrient cycles. The product is locally produced for local farmers. It is a high value product which can be used in crops who have a need for nitrogen and potassium.

### How to use:

- **Type of farming:** conventional
- **Cultivation methods:** open field
- **Recommended crops:** Fresh vegetables, Root crops and plants, grain maize and corn-cob, permanent grassland and dry pulses and protein crops.
- **Application doses:** Depends from crop application rates. Currently max 170 kg N/ha as livestock manure (230-250 kg N/ha for derogation dairy farms), pilot RENURE fertilizer in NL.

### Contact

**Name:** Ben Alders

**Company:** Vlako B.V.

**Web:** [www.vlako.nl](http://www.vlako.nl)

**e-mail:** [info@vlako.nl](mailto:info@vlako.nl)



## Mineral concentrate from pig/cattle slurry using belt press sieve and reverse osmosis processing



### Key product features:

- N: 6,5 kg/ton
- P<sub>2</sub>O<sub>5</sub>: 0,1 kg/ton
- K<sub>2</sub>O: 7,5 kg/ton
- MgO: 0,5 kg/ton
- S: 3,2 kg/ton
- EC: 37 mS/cm

Due to the organic origin of the fertilizer, nutrient content may vary

### Key product benefits:

- Natural product from organic source
- Low phosphate content
- Contains natural trace elements
- Low heavy metal contents (Cu: <0,1 ppm; Zn: 0,14 ppm)
- Less leaching of nutrients compared to unprocessed manure
- Closing the agricultural cycle by replacing chemical fertilisers.
- Saves money compared to the use of chemical fertilisers.
- Local produced for local farmers.

### Competitive position and advantages:

The product is allowed as pilot RENURE fertilizer in NL which means that application is no longer defined as livestock manure in the Nitrates Directive. The mineral concentrate can replace the conventionally used chemical fertilisers. The product has fast working nitrogen and which is almost entirely used, which means less leaching of nutrients compared to unprocessed manure. Mineral concentrate is made from Dutch manure and contributes to closing agricultural nutrient cycles. The product is locally produced for local farmers. It is a high value product which can be used in crops who have a need for nitrogen and potassium.