

25
Years



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04-06-2015



Topic 1:emmission of pig-stables

Topic 2:validation of residual feed

Topic 3:smartmanure (nutrient recovery)

04-06-2015

Emission in pigs stables



Most important types of emissions

- ammoniac
- odeur
- Green house gases (methaan, nitric oxide and carbon dioxide)
- Regulations about ammoniac and odeur (in flandres part of belgium)
- Regulation of GHG in the future (year ?????)

Most important Solutions



- End of pipe solution (scrubber)
- Source-directed solution
- Reduction by feed

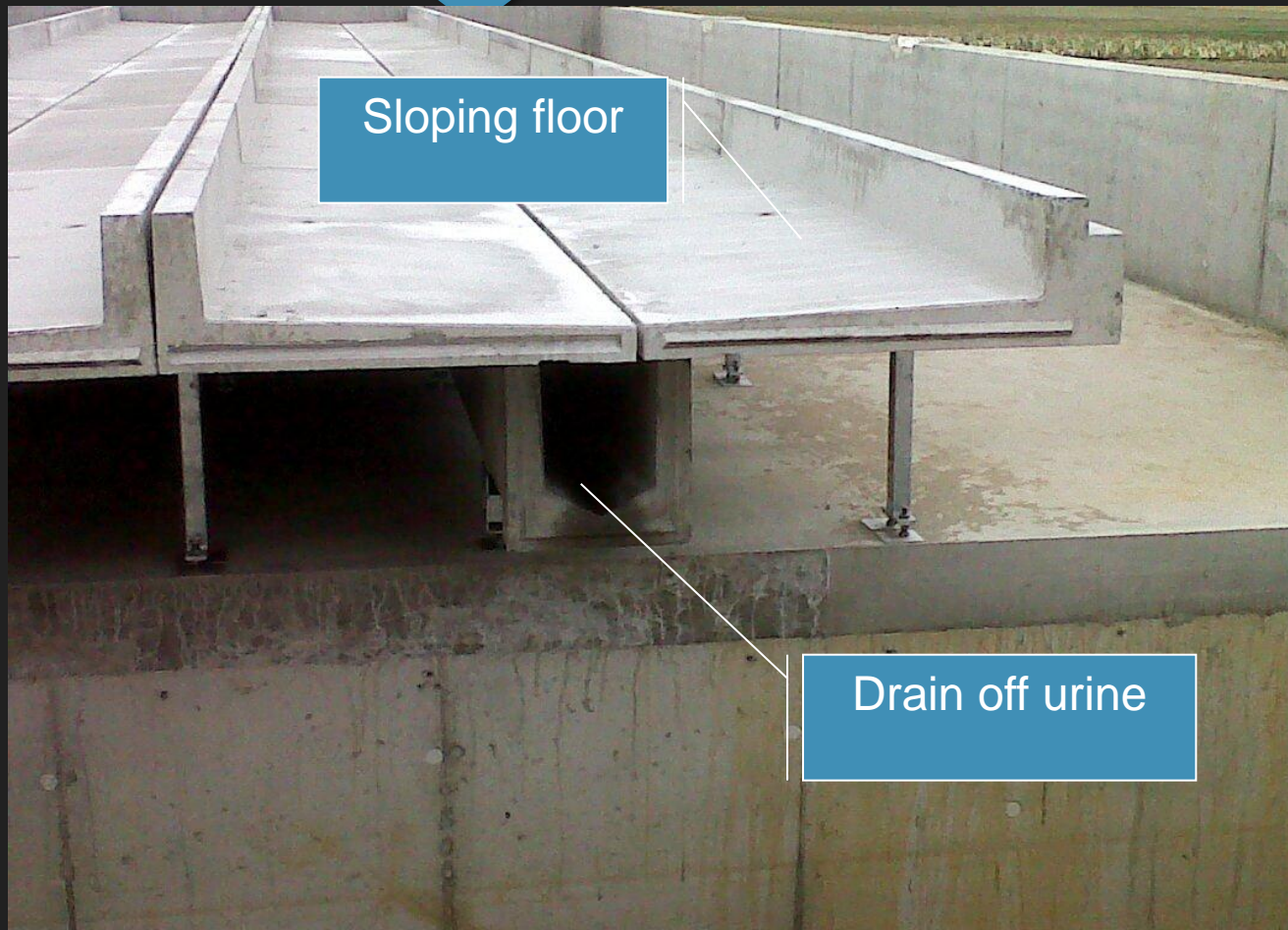
Source-orientend way



- Most important source of emmission=mix manure stock
- Vision:keep the solid and liquid fraction separated (NH₃)
- Remove the manure asap
- Liquid fraction in closed stock
- Solid fraction into a biogas plant

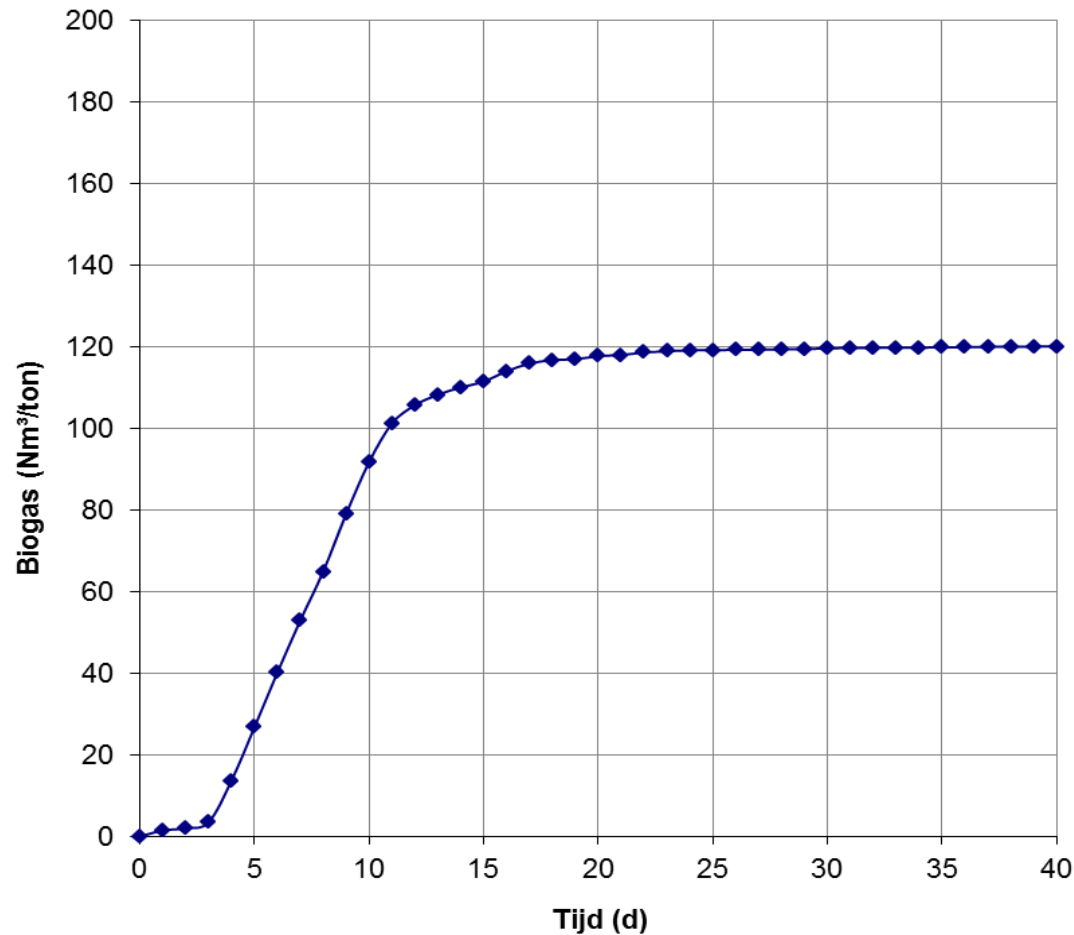


Source-oriented way



Removing the solid fraction by mechanical scraper

Biogas profit off fresch manure



120 nm³ off biogas / ton max:30% dm

65% methaan

4-5 times more energy versus old manure

Conclusion (most imported)



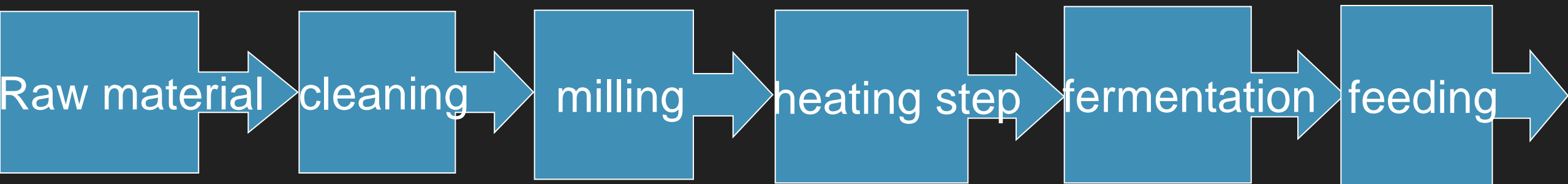
- Min 60% reduction of ammonia and GHG
- Min 75% reduction of odour
- Solid fraction is energy source instead of waste
- Better working conditions
- Sustainable solution

Validation off residual feed



- Flanders=process waste of residual vegetable flows
- Dumping is difficult (nitrate regulations)
- Contains protein (up to 25% of 100% dm)
- Problem: not digestible for pigs
- Contains contaminations (bac, minerals etc.)

Flow chart off validation



Removing
contamination
0% digestable

50-60% digestable

80-85% digestable

Illustration input



Input of raw materials

Vegetables
potatoes

Illustration cleaning, milling and heating



Cleaning
By water flow

Own design
Wet Milling system

Heating until 90-95°C
Tube in tube system
With heating recovery



Illustration of fermentation using agriton product



Introduction of bacteria and ferment
into the isolated fermentation unit
Production of lactic acid



Illustration of storage



Storage tank after min:
24h of fermentation
Check point PH=3

Research on new crops



LG-BROCHURE voor voederbieten



2015
2016

- Voederbieten, enkel voordelen:
- 120-130 ton opbrengst per ha
 - 18-20 ton drogestofopbrengst per ha
 - 1100 VEM per kg drogestof

Type of crop : Tarine and brizar
120-130 ton each ha
18-20 ton of dry matter
High energy value

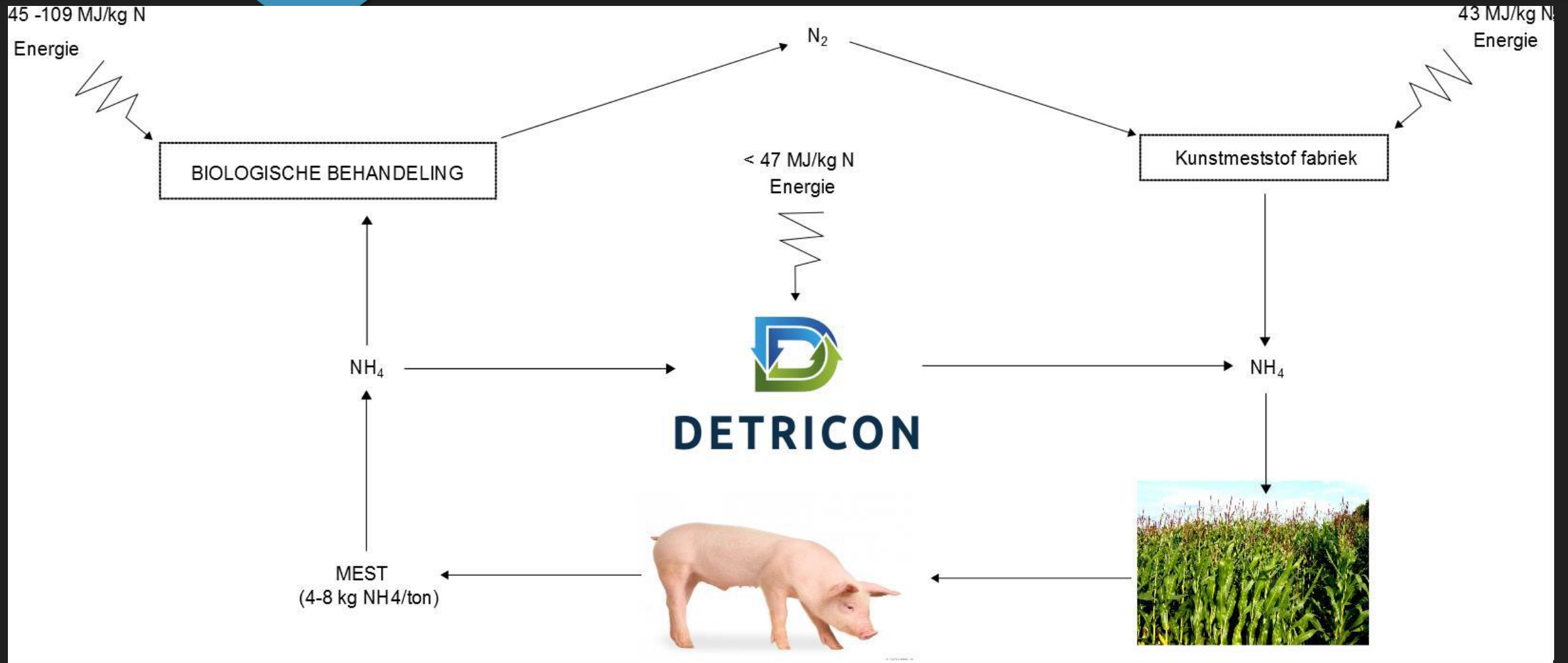
1ha is sown this year for pig feed

conclusion



- Solution for residual or waste food
- Solution on environmental level
- Clean and pasteurized food
- Fermented food
- Healthy food

smartmanure



Commodity explanation of biobased fertilizer



DETRICON MATERIAL SAFETY SHEET

AMMONIUM NITRATE 50-80%

DETRICON
ir. Denis De Wilde
Bargiestraat 1A
8900 Ieper, België
M: denis@detricon.eu
T: +32 486/69.77.79
W: www.detricon.eu

Identification of the supplier
Adres: Bargiestraat 1A, 8900 Ieper, Belgium
Tel: 0032 486/69.77.79
Mail: Denis@detricon.eu
Website: www.detricon.eu

In case
Belgium:
Antipoison Center - Brussels:
Tel: 070/245.245

1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

- Chemical description : Ammonium nitrate , Ammonsalpetre , solution (50-80%)
- Type of product : Pure product in solution .
- Reach registration number : 01-2119490981-27

1.2. Relevant identified uses of the substance or mixture and uses advised against

- Identified use(s) : At this time we do not yet have information on identified uses. They will be included when available.
- Use(s) advised against : At this time we do not yet have information on uses advised against. They will be included when available.

1.3. Details of the supplier of the safety data sheet

- Company identification : See heading of Material Safety Data Sheet.

1.4. Emergency telephone number

- Emergency phone number : See heading of Material Safety Data Sheet.

2. Hazards identification

2.1. Classification of the substance or mixture

Classification according to Directive 67/548/EEC or 1999/45/EC
Not classified.

Classification according to Regulation (EC) No 1272/2008
Not classified.

2.2. Label elements

Label in accordance with Regulation (EC) No 1272/2008

- According to the applicable legislation, this product has not to be labelled.

2.3. Other hazards

- Physical/chemical hazards : The substance decomposes by heating or burning in formation of toxic vapours.
- Hazards for the health : A health dangerous concentration in the air will not or very slowly be reached by evaporation of this substance at app. 20°C, by spraying much faster.
- Hazards for the environment : Product causes a drop of the pH-value of water and soil
This product is no substance or contains no PBT or vPvB (in accordance with Annex XIII).
- Hazards for the safety : Contact with contaminations liberates shock-sensitive mixtures.

Field test biobased fertilizer



End of session



Thx !
Questions?
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