

Technologies

FOR SUSTAINABLE FOOD PRODUCTION IN THE BALTIC SEA REGION



A new VERA Verification Statement has certified 26% reduced ammonia emissions from mink houses cleaned daily, compared to the normal practice of weekly cleaning.

Photo: Torkild Søndergaard Birkmose.

Knowledge sharing

Results from monitoring of Hofmangave drain water

By Henning Lyngsø Foged, Agro Business Park

Knowledge Centre for Agriculture has in the winter 2012/13 monitored the water in four drains at Hofmangave in Denmark. The four drains are situated at a field, which in 2012 were equipped with controlled drainage, but the controlled drainage was so far not activated, because the intention is to use the first year's registrations as a baseline for comparison later on.

Based on meteorological data for evaporation and precipitation etc. it is calculated that 210 mm water has been flushed out via the drains in the period from 1 September 2012 to 30 April 2013, equal to 2,100 m³ water per ha.

The run-off was measured from 30 October to 23 April. The main part of the run-off took place in the period from the end of November to mid-February. The nitrogen concentration in the drain water was higher than the average of a parallel drainage water study from 2012/13, organised by Knowledge Centre for Agriculture, while on the other hand, the precipitation is lower at Hofmangave than the average for Denmark. The loss of nitrogen (N) with the drain water was between 22 and 32 kg per ha. As the monitored field is situated about 1 metre below sea-level, there is assumed to be a constant rising water movement below drain depth, also meaning that all loss of nutrients happen via the drains, not to the groundwater. The loss of phosphorus (P) was negligible.

This issue

P 1: Results from monitoring of Hofmangave drain water

P 2: New Danish policies – "A new start"

P 2: New VERA Verification Statements and other information on the Agro Technology ATLAS

P 3: SyreN+ - slurry acidification and nutrient balancing in one operation

P 3: Inventory: Techniques for Nutrient Recovery from Digestate

P 4: Enterprise Europe Network partner searches

P 5: Upcoming events



The results of the monitoring shows, that the loss of nutrients At Hofmansgave is in the same level as measured in a Swedish trial (see Technologies newsletter No. 7), which also documented the relatively large annual variations, due to variations in the weather, and probably also to the soil tillage and cropping of the measured field.

With losses of nutrients in the level as registered at Hofmansgave, it gives good meaning to establish controlled drainage or other SCIEN drainage installations.

The detailed results of the drain water monitoring at Hofmansgave can be downloaded from <http://goo.gl/Rsmv5>.



New Danish policies – “A new start”

The Commission on Nature and Agriculture, an ad hoc expert group set up by the Danish Government, has recently finalised their report recommending reformulating policies for future regulation of the agricultural production. The report presents 44 recommendations, grouped in areas concerning nature, environment, plant protection, climate, spatial regulation, food innovation and marketing, use of biomass potential, promotion of innovative technology, EU’s agricultural policy, support to innovative competences, and effective enforcement. The Commission claims that the implementation of their recommendations would lead to setting new standard for a sustainable agricultural production to the benefit of the agricultural sector business, the environment, the nature and the climate.

The report can be downloaded from <http://goo.gl/HPP35>



New VERA Verification Statements and other information on the Agro Technology ATLAS

Two new VERA Verification Statements has been issued and the corresponding technologies described on the “ATLAS”. The technologies are in this case of management-type, comparing the usual practice of weekly cleaning of mink houses with removal of slurry every day or twice a week. You find the descriptions, including the Vera Verification Statements here - <http://agro-technology-atlas.eu/techdescs.aspx?techgroup=300>.

Additionally, within the “Separation by Sieves” section at the Agro Technology ATLAS (<http://agro-technology-atlas.eu/techdescs.aspx?techgroup=400>), you can find an updated description of the technology, based on a test performed by AgroTech of a separator offered by SepKon.

The ATLAS was also added a preliminary description of “Acidification and balancing of liquid manure with macro and micro nutrients during field spreading” – see <http://agro-technology-atlas.eu/techdescs.aspx?techgroup=1000>.

If your organisation supplies agro-environmental technology and would like to be mentioned as supplier, then you are welcome to contact Henning Lyngsø Foged, Agro Business Park, hlf@agropark.dk.



New technology

SyreN+ - slurry acidification and nutrient balancing in one operation

BioCover has now further developed their system for slurry acidification during field spreading. The consumption of mineral fertiliser is going down in Western Europe, while the need for an effective recycling of nutrients in fertilisers is going up along with increased prices of phosphorus, sustainability needs and striving for biobased economies.

BioCover has therefore launched SyreN+, which apart from the acidification also balance the N:P ratio of the slurry by use of liquid ammonia. While the slurry already is enriched with sulphur through the acidification, it is also possible to add micro minerals like for instance manganese to the slurry. The system is therefore able to balance the nutrients exactly according the needs of the crop on the individual field, and additional fertilisation with mineral fertiliser is not necessary.

The SyreN+ system was demonstrated on 11 June 2013:



A preliminary description of the SyreN+ system is found at <http://agro-technology-atlas.eu/techdescs.aspx?techgroup=1000>.

Morten Toft, the owner and founder of BioCover, was in 2012 given the Danish CSR Award, and has been appointed as the Danish SME nominee of the European CSR award ceremony, taking place in Brussels on 25 June 2013.



The main visible difference between SyreN+ and the conventional SyreN system is that the slurry tanker has an in-built tank for liquid ammonia, here seen from the rear end of the slurry tanker.



Owner and founder of BioCover, Morten Toft, when he received the Danish CSR 2012 environment award. Morten Toft is now nominated as the Danish SME candidate for the European CSR award.



Project report

Inventory: Techniques for Nutrient Recovery from Digestate

The report is an outcome of the ARBOR project, and you can find the finalised inventory on Techniques for Nutrient Recovery from Digestate here:

http://vcm-mestverwerking.be/publicationfiles/VCM001_Rapport_04_LR.pdf



Business Support on Your Doorstep

Enterprise Europe Network provides internationalisation and innovation services to small and medium sized companies. The network is a project co-financed by the European Commission and is being implemented as part of the Commission's Competitiveness and Innovation Framework Programme.

The European-wide network consists of 3,500 experts in more than 50 countries and reaches almost 23 million SMEs.

Click on the links if you are interested in one of the shown partner searches, or visit

<http://portal.enterprise-europe-network.ec.europa.eu/>

Examples of current Enterprise Europe Network partner searches:

Design software for irrigation systems (Ref. 11 IT 532W 3L00)

An Italian SME offers a very advanced sw for designing irrigation systems of any complexity and size in an easy, powerful and innovative way by designing correctly and efficiently any kind of system. It's the only tool that optimizes water and improves the distribution uniformity, increasing system efficiency and ensuring the correct distribution of water and fertilizers. It is costs saving and improves quantity and quality of agricultural production. Different partners and agreements are sought.

Detailed information:

http://www.enterprise-europe-network.ec.europa.eu/matching/completetec.cfm?BBS_ID=176039&COMPANY=732180

Thermo-mechanical digestion of biogenous refuse for horticulture and agriculture (Ref.: 11 DE 094I 3LRF)

A German medium sized enterprise has developed a technology for thermo-mechanical digestion of biogenous refuse. The system is a well-trying and successful system and gives the end-product special properties thanks to which a wide range of qualitatively different products can be made. The company is looking for industrial partners able to implement the system and for several new applications, e.g. in the building construction sector.

Detailed information:

http://www.enterprise-europe-network.ec.europa.eu/matching/completetec.cfm?BBS_ID=168171&COMPANY=732180

Phosphorous Removal and Recovery from Wastewater (Ref.: 12 IE 51S6 3RHN)

An Irish company with a background in the area of water treatment has developed a novel competitive technology for the removal of phosphorous from wastewater streams. The system uses a specifically tailored synthetic filter media to achieve the desired result and a full scale prototype of the technology has been successfully trialled at a local authority wastewater treatment facility. The company seeks licensing opportunities with companies in the water treatment sector.

Detailed information:

<http://dnx.eenmachine.com/dnx/services/pdfprofile.asp?id=12%20IE%2051S6%203RHN&EnquiryType=BBS>

BioGaps: Web-Based Monitoring and Supervising software for biogas capture networks (Ref.: 13 ES 24D4 3RSQ)

A Spanish company has developed a software application designed to supervise and monitor a biogas capture network. This software has, among other innovative features, a modern web-based interface, multiuser system with concurrent working possibilities and an interactive map with additional options. The application is now running in the organisation in charge of solid waste management in the region of Asturias. Industrial partners are sought for commercial agreements with technical assistance.

Detailed information:

http://www.enterprise-europe-network.ec.europa.eu/matching/completetec.cfm?BBS_ID=175994&COMPANY=732180

Colophon

This electronic newsletter is sent out quarterly from <http://agro-technology-atlas.eu> with the purpose to support innovation and investments within agro-environmental technology in the Baltic Sea Region by publishing relevant knowledge about the issue.

We encourage everyone to contribute with content to this newsletter by contacting the editors.

For subscription or un-subscription, please register at the web-page <http://agro-technology-atlas.eu> or notify one of the editors via e-mail.

Editorial board

- Henning Lyngsø Foged, Project Manager, Agro Business Park, hlf@agropark.dk
- Marie Poulsen, Communicator, Agro Business Park, mp@agropark.dk
- Kaj Granholm, Project Leader, Swedish Agricultural University, Kaj.Granholm@slu.se

Published by

Agro Business Park A/S
Niels Pedersens Alle 2
DK – 8830 Tjele
Phone: +45 8999 2500

This newsletter is published in the frames of the Baltic Compact project



by leader of Work Package 4, Agro Business Park A/S



with co-funding from the Baltic Sea Region Programme



Upcoming events

Conference Announcement 2013

Venue: Helsinki

Date: 27-28 August 2013

The event: Since the conference A Greener Agriculture for a Bluer Baltic Sea in Copenhagen in October 2012, a working group has been preparing for a new conference in 2013.

The conference is organised by Agri-environmental EU projects Baltic Compact, Baltic Deal and Baltic Manure, Baltic Impulse together with HELCOM, CIEC, WWF and NJF. Register for the conference here www.gabbs.eu. **The final day for registration is 26 July.** There are only a limited number of seats available so sign up now!

More info: www.gabbs.eu

Bioenergy 2013, Exhibition and Conference

Venue: Jyväskylä Congress and Fair Centre Paviljonki, Finland

Date: 4-6 September 2013

The event: The Conference will focus on the factors affecting the future of the bioenergy and biobased modern technologies and business solutions. This will include logistic systems, management, total procurement chains, the effects of the energy markets, the influence of green marketing, international trade and other trends affecting forestry, agriculture, industry and climate.

More info: <http://www.bioenergyevents.fi/>

2nd International Conference WASTES: Solutions, Treatments and Opportunities

Venue: University of Minho, Braga, Portugal

Date: 11-13 September 2013

The event: The primary goal of this event is to bring together experts from the Waste Management and Recycling sectors from around the world. Discussions regarding the balance between economic, environmental and social outcomes will be carefully addressed. The development of innovative techniques, tools and strategies to improve corporate environmental performance, the understanding how industry activities impact on the environment and the options analysis for its improvement are also key objectives for this event. The official language of the Conference is English.

More info: <http://www.wastes2013.org/node/13>

En ny start: Hvordan og hvornår? (A new start – how and when?)

Venue: Agro Business Park

Date: 18 September 2013, 9:30 to 16:00

The event: The purpose of the seminar is to get a presentation of the report from the Commission on Nature and Agriculture by some of those who have been involved in formulating it, and furthermore to enable authorities, companies and researchers to discuss which technologies, frameworks and solutions appropriate to use in order to implement the report's broad recommendations, and when this can happen.

The report from the Commission on Nature and Agriculture will be presented by Søren Frandsen, Pro-Rector at Aarhus University and member of the Commission on Nature and Agriculture, and commented by Martin Merrild, Chairman of Danish Agriculture & Food Council.

The seminar is organised by Agro Business Park within the frames of the Baltic Compact project, in cooperation with Innovation Network for Biomass (INBIOM), and the IMPLEMENT project.

The seminar will be held in Danish language.

More info: To be announced at <http://agro-technology-atlas.eu>.

International Sustainability Science Congress

Venue: Copenhagen, Denmark

Date: 22-24 October 2014 (NB. Please note that the event takes place next year)

The event: The Sustainability Science Congress puts global focus on research related to global sustainability issues, including climate change. The congress is a follow-up from the inaugural climate congress held in 2009 in conjunction with COP-15 in Copenhagen.

In a unique cross-disciplinary setting scientists', businesses and policy makers are invited to consider and explore sustainable solutions together. Join in when leading experts from a wide variety of disciplines guide us through the newest research related to global sustainability and cut across their fields to create synergy between the topics: Health · Biodiversity · Economy · Climate Change · Planetary Boundaries · Food security · Biomass · Water access · Stewardship · Urbanisation · Energy · Social equity. Mark the dates in your calendar now!

More info: www.sustainability.ku.dk/iarucongress2014

ManuREsource: International conference on manure management and valorization

Venue: Provincial Court in Bruges, Belgium

Date: 5-6 December 2013

The event: The conference will stimulate the exchange of experiences between regions on the policy measures taken for coping with manure surpluses, both in terms of manure management in a broad sense, and more specifically in terms of manure treatment.

Moreover, the conference aims to give an overview of the current developments and innovations in manure treatment technologies and to explore various valorisation strategies for manure, like energy production and nutrient recovery.

More info: <http://www.manuresource2013.org/>