Press release

ManuREsource conference calls for more collaboration to reach the objectives of the circular economy

From 27 until 29 November, the third edition of ManuREsource took place at Eindhoven (The Netherlands) and welcomed more than 230 participants from 28 countries. At this third edition the legislative framework concerning manure has been addressed extensively in the presence of members of the European Commission DG ENVI and DG GROW. Economic feasibility, marketability of the products and public awareness remain the main obstacles for the transition to a circular manure processing. More collaboration, not only with the mineral fertilizer industry but also with agrofood concerns was mentioned by the attendees as a key condition.

Within the framework of the recent Dutch developments concerning manure processing, ManuREsource 2017 came at the right time. Never before the need and the pressure for a future-oriented, sustainable manure processing - from which both the livestock holder and the crop farmer can profit from - was higher. Also in Flanders this topic is an important issue which recently was also the focus of the vision note on the transition of manure processing towards a circular economy, published by the Flemish Coordination Centre for Manure Processing in July 2017.

This transition towards a circular economy for manure and digestate processing was the central theme at ManuREsource 2017. The conference brought together relevant companies, research institutions and governments from all over the world to join forces in order to turn animal manure from a problem into an opportunity. Anne-Marie Spierings, Deputee of Agricultural Development in the Province of Noord-Brabant, confirmed the importance of this triple helix collaboration between business, policy and research to make manure valorization circular.

Towards a Circular Economy

The importance of collaboration was also confirmed by representatives of the European Commission DG ENVI, the mineral fertilizers industry, the manure processing industry, RISE and the University of Milan, during a lively panel debate on the possibilities and the bottlenecks to deal with a manure surplus in a circular and sustainable way. This topic was also tackled in smaller groups during round table discussions.

Professor Fabrizio Adani (Milan University) confirmed that technology for nutrient recovery is available, particularly on farm (local) level. Besides technology readiness also viability of the individual business cases is of utmost importance. Public voting confirmed this, the majority (35%) thinks the focus to make manure and digestate processing circular, should be on the economic feasibility of full-scale techniques, besides tackling additional technological deficiencies. Other important bottlenecks to be dealt with according to the conference attendees are the legislative context (25%) and the marketability of the products (24%).

The proof of a lot of techniques being available right now was given by Steven Rowe, CEO of Newtrient, the company representing US dairy producers. He presented their online dairy industry evaluation catalogue with independent expert evaluations of manure processing technologies and suppliers. To date, the catalogue focuses only on US technologies for dairy manure but Newtrient is open to extend the catalogue to European suppliers of dairy, pig and poultry manure processing technologies.

It is obvious that there is no 'one size fits all' solution for manure processing. For example, about half of the audience thinks nutrient recovery involves central, big scale plants, such as the plants visited during the site visit after the conference, i.e., Groot Zevert Vergisting in Beltrum and Terramass in Odiliapeel, the other half believes more in small scale, local nutrient recovery. The truth will be somewhere in the middle, with the best solution being a case by case approach.

In contrast, there is clear agreement on the importance not only to focus on nitrogen or phosphorus recovery, as manure is more than nutrients alone and contains other valuable ingredients such as fibers and organic matter.

Market for recycled products from manure

From public votes during the panel debate, the majority of the audience thinks in the near future recycled nutrients will replace mineral fertilizers or will be used as resource to produce mineral fertilizers. The importance to collaborate with the mineral fertilizer industry was confirmed by Kees Langeveld from ICL Fertilizers during the panel debate.

To create an open, single European market for the recycled products, a new European Fertilizer Regulation is in development (publication expected in 2018). The ongoing legislative process has been presented by Johanna Bernsel, European Commission DG GROW.

During the panel debate and the round table discussions, different voices agreed that a product must be judged by quality and not by its origin. However, this evaluation could differ depending on the intended use: different requirements could be set if the product is to be used as fertilizer or as a resource for the chemical industry. Indeed, also in the chemical industry there are plenty of opportunities waiting for recycled products from manure, and even the feeding industry could in principle be provided with microbial proteins from manure!

Call for scientific information on high efficient manure derived fertilizing products

An important discussion point was the obstacle to manure nutrient recycling posed by the 170 kg N/ha application limit for animal manure, even in processed form, in Nitrate Vulnerable Zones, as fixed by the Nitrates Directive. ManuREsource 2017 attendees learnt that the EU Nitrates Committee and DG ENVI intend to mandate JRC (the European Commission Joint Research Centre) to propose specifications under which certain recycled manure products could be counted outside of the 170 kg N Nitrates Directive limit. By translating the results of the JRC study, which will probably take two years, into policy, a possible new interpretation of what is called 'processed manure' in the Nitrates Directive could be given. ManuREsource 2017 attendees got the message to provide all information that is available on these products to JRC, both on their agronomic (nutrient efficiency,…) as well as their environmental behaviour (leaching characteristics, contaminant content,...), in order to speed up the process. Besides the possible effects on surface and ground water quality, it could also be rewarding to take into account Life Cycle Analyses, the impact on greenhouse gas emissions or other indirect

consequences. In this context, the Dutch Ministery of Agriculture, Nature and Food Quality launched a call for the formation of an expert group to provide as much as possible existing evidence and data to JRC.

Involvement of agrofood concerns

Another discussion point was the price of manure processing, nutrient recovery and the circular economy: who will pay at the end of the day – is it the consumer, the farmer, agrofood concerns, the government? And how can farmers pass on the costs of the use of recycled nutrients in food production in a world economy?

In this discussion, it is clear that the public awareness on the use of recovered manure products plays a central role. There were voices that it is up to the manure processing sector to create society acceptance, this by giving correct information and provide transparency. In all this, the focus should be on the main objective of sustainability which will become obvious in future generations.

It can be concluded that raising the public awareness about manure and digestate processing is one of the main tasks in the near future, and agrofood concerns can play an important role in this. A good example of the agrofood industry giving incentives to the farmers to work on sustainable practices was presented by Danone and Friesland Campina, both showcasing their involvement in the manure processing sector. Cees Jan Hollander of Danone, explained why manure management, in this case both nutrient recovery on farm scale and the fermentation of manure, is essential to the company's sustainability (reducing greenhouse emissions) and social (strengthen supplier farmer relationships) commitments. Jan Willem Straatsma, of Friesland Campina, a dairy cooperative, confirmed the importance of manure processing as the key to sustainability of dairy production and enabling compliance to the phosphorus and nitrogen spreading limitations. The focus of Friesland Campina on monodigestion of manure on dairy farms in the Netherlands, coupled to nutrient recovery from the digestate, relates to the need to reduce the carbon footprint of the company, expected not only by their consumers, but also by their industrial customers such as Danone.

ManuREsource 2017 proved there are still challenges to reach full nutrient and material recovery from manure whilst ensuring economic viability and environmental protection. This was confirmed by the ManuREsource 2017 Position Paper, which was presented to be signed during the conference. Soon this Position Paper, signed by a significant number of ManuREsource 2017 attendees, will be sent to relevant policy makers.

Collaboration between constructors, farmers, researchers, consumers and policy makers can be the foundation to reach the objective of a circular economy in the area of manure valorisation, especially if also the mineral fertilizer industry and agrofood concerns could be involved in the process.

Manuresource is a joint organisation of the Flemish Coordination Centre for Manure Processing (VCM vzw), Ghent University, Inagro and POM West-Flanders. For the first organisation in the Netherlands, the Nutrient Platform (Netherlands) joint the partnership.

For all information, see: http://www.manuresource2017.org/

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