

## 4<sup>th</sup> Phosphorus in Europe Research Meeting (PERM) Online, 2<sup>nd</sup> June 2021

Event web page: [www.phosphorusplatform.eu/PERM4](http://www.phosphorusplatform.eu/PERM4)

Registration: <https://us02web.zoom.us/meeting/register/tZ0qcOmrrjouEtRlibbtiMrcZVSKb4MEvYyc>

### Brief on the “Contaminants, safety, LCA” session at 4<sup>th</sup> Phosphorus in Europe Research Meeting (PERM), Online, 2nd June 2021

The session was moderated by Ludwig Hermann, PROMAN. Several topics were open in term of legislative demands for standardisation or legislative changes for the recovered products in terms of contaminants and safety issue as well as LCA. In total 35 participants attended the session.

#### a) Regarding LCA presentations

**Proman** gave a review from the LCA studies they have implemented, among which Lex4Bio.

In total they collected 123 LCA studies dealing with Biobased products.

A lot of these studies include field studies but also the vast majority of the LCA (2/3) assumed 100% substitution of minerals fertiliser which is problematic

The **IMT Mines Albi Carmaux** of the CNRS showed that besides using Phosphorus as a BBF from WWTP, we can use as a catalyst for batteries

**Université de Liege** showed the methodology used in Phos4you is system expansion

The limit of Zinc and copper in the FPR should be further specified according to plant and soil type

According to Liege University both systems Euphoria and struvia have environmental benefits compared to the reference scenario and more within the environmental guidelines

**Ghent University** gave specification on LCA of struvite recovery and a comparative assessment of waste water sludge end use within the N2C project. They compared the status quo in Belgium versus the P recovery as struvite or as Ash. They showcased 2 models: a) Model 1 : WWTP with struvite recovery versus commercial mineral fertiliser; b) Model 2: comparing status quo sludge management in Belgium versus ash P recovery

**Run4Life** presented the different approaches between centralised and decentralised WWTP.

**Water2Return** presented the model they adopted for LCA and risk assessment

#### b) For contaminants

**Gent University** gave the example from the Interreg Project Phos4You

Heavy metals should be limited of Metal to phosphorus ratio unless the P concentration is first standardise and the contaminants limits are adjusted accordingly.

The limit of Zinc and copper in the FPR should be further specified according to plant and soil type

**Thomas More** gave the example of work they are doing. They want use alga grown on liquid manure as a feed for chicken. No legislation for this type of application of microalgae from liquid manure. There are many demands for amending legislation according to these findings

- ➔ There are still many discrepancies between the LCA studies which makes it difficult to draw a conclusion as well as to compare the different LCAs. It is necessary to make a common ground such as type of WWTP, unit for expressing P availability and others to allow a comparison.