BioBoost
Accelerating biobased horticulture

Struvite from potato blanch water as a natural fertilizer

Crop	Potato *Solanum tuberosum*
Croppart	Roots / Tubers
Application area	Fine chemicals
Status	Development stage
Public availability	Public
Relevant plant compounds	Struvite

Description

The recovery of phosphates in the form of struvite from all kinds of phosphate-rich water flows takes place in all kinds of places in the Netherlands. However, the use of these recovered phosphates only takes place in a limited number of places. Low-quality struvite can serve as a raw material for the fertilizer industry (ICL Fertilizers). High-quality struvite such as Vitaphos (possibly also Crystal Green in a few years) is used as fertilizer. This could be in many sectors, from golf courses to potato growing. Vitaphos appears to be valuable as fertilizer on golf courses. Tests have shown that this also generates good yields in various agricultural crops. However, for the moment little practical experience has yet been gained. There is a phosphate surplus in the Netherlands. Livestock farmers with a derogation are not allowed to use phosphate fertilizer, and therefore no struvite. Livestock farmers who do not fall under the derogation can fill their phosphate space, which remains after organic fertilization, with a phosphate fertilizer. This phosphate fertilizer can be struvite, but also the thick fraction of animal manure. There is more room for this on grassland than on arable land

Pros and cons

- Circular economy
- Upgrading of residual flows

- Legislation
- Very competing market

Used conversion methods

Mechanical-Physical processes

Extraction

Biochemical processes

Anaerobic digestion

Resources

https://www.clm.nl/uploads/nieuws-pdfs/CE_Delft_2H98_Potentie_struviet_voor_NL_landbouw_DEF.pdf Initiative website