

Contacts

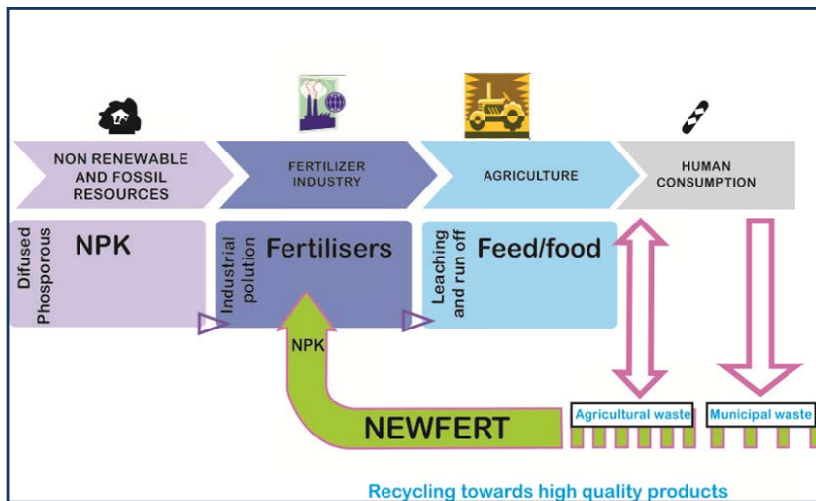
- ✦ Fertiberia: Javier Braña jbl@fertiberia.es
- ✦ University of León: Antonio Moran amorp@unileon.es
- ✦ Drage & Mate International: Amalio Garrido garrido@dragemate.com
- ✦ Irstea: Marie-Line Daumer marie-line.daumer@irstea.fr
- ✦ Proman: Ralf Hermann ralf.hermann@proman.pro
- ✦ KompetenzZentrum: Christian Kabbe Christian.Kabbe@kompetenz-wasser.de

Nutrient recovery from biobased waste for fertiliser production



Objectives

NEWFERT project proposes tackles the design and development of different enabling technologies to allow the re-use and valorisation from biowaste making them suitable as secondary raw material in the fertilizer industry: a new brand of cost-effective, eco-friendly and healthy advanced fertilisers. Furthermore, NEWFERT (New Fertilisers) targets highly plant available combination of specific organic and mineral components and sets up ranges of their concentration in NPK fertilisers.



Approach

This proposal is focused on closing the fertiliser loop, through nutrient recycling strategies on an industrial scale. That means that the aim is to find a viable nutrient recycling scheme, which combined with better nutrient use efficiency, can lead to major improvements in overall resource use.

Main activity

- Characterisation of bio waste streams.
- Recovery technologies from solid waste.
- Recovery technologies from liquid waste.
- Industrial valorisation



The project starts working with data collection, characterisation and analysis of biobased residues.

Two main waste ways for nutrients recovery:

- Designing a new process to recover nutrients from ashes (sewage, manure and household waste, etc) modifying existing industrial processes, development of new chemical nutrients extraction technologies and scale-up of the integrated system.
- Involving different technologies of nutrients recovery from liquid biowaste.
 - ✓ Chemical acidification, separation, struvite crystallisation and nitrogen recovery as ammonium sulphate.
 - ✓ Bioelectrochemical system. This technologies based on Microbial Electrolysis Cells.

The fertilisers obtained with these biowastes will be validated in an agronomic demonstrative environment.