

# PhD fellow in the EU FertiCycle project (ETN)

TOPIC : the potential market development and cost-benefit analyses for organic waste based fertilisers

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Do you want to contribute to a more **sustainable** future and development of solutions for the **circular economy**? Do you want to build expertise in both **economics** and **agriculture**? Are you looking for a place where you can combine working in a **company** with exploiting **academic** research?

United Experts (Belgium) is offering a 3-year PhD position to work on the market development of organic waste based fertilizers, commencing 1 Sept 2020, as part of the European Training Network 'New bio-based fertilisers from organic waste upcycling (FertiCycle)'.

## Description of the working environment

United Experts is a knowledge network with a very broad variety of expertises. The open PhD-position is within the activities of the department "DLV-Market Advisory Services". This department not only consults for Agro & Food clients in market development and market strategies, but also actively seeks solutions, innovations and opportunities for optimizing market systems – as a support for the agricultural and food sector. Although the fellow will be working in a private company, there is the opportunity to enrol as a PhD fellow, thanks to the close cooperation with the University of Ghent who is also a partner within the FertiCycle project.

## FertiCycle Project description : the European Training Network (ETN)

The work of the PhD fellow will be part of the EU FertiCycle Network, which is a multidisciplinary European Training Network (ETN) funded by the European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie actions. The FertiCycle Network comprises 9 world leading universities and 7 research institutions / agencies/companies in 8 European countries. The FertiCycle Network is currently recruiting 15 highly talented and motivated candidates for PhD studies, with the skills, knowledge and enthusiasm to help our network make successful research breakthroughs on new bio-based fertilisers from organic waste upcycling – the chosen candidate will be collaborating with these colleagues for the coming 3 years.

## Description of the research topic

The candidate will focus on the development of the market for bio-based fertilisers. Nowadays the "economic value" of these fertilizers in the market does not correspond with their actual values, which provides no financial incentives to stakeholders for the production of bio-fertilisers. In order to obtain the actual interest, investments and actions towards a broader production of bio-fertilizers, there is the need for a less volatile and more stable market.

The chosen candidate will support the development of this market by assessing different perspectives: (i) the development of a new economic model for the pricing of bio-based fertilisers, and (ii) possible Risk Managing Strategies for price volatility. Both aspects require a good knowledge of the (fertilizer) market and involve stakeholders, legal constraints and overall economic strategies. United Experts can – as a consultancy company – offer direct insights and connections for all of these required aspects. We possess of all required "hedging software" for doing the in depth calculations required for assessing

correlations, hedging effectivities and hedging ratios between the cash markets and the different futures markets. Through United Experts the candidate will have a direct link to the market, and in close cooperation with the University of Gent the modelling will be shaped and theoretically assessed.

The candidate will also be asked to do secondment (internship as visiting researcher) at one of the other FertiCycle partners for a shorter period of time (1-3 months).

**Main Supervisor(s):** Mr. Dirk Coucke ([dc@unitedexperts.be](mailto:dc@unitedexperts.be)) and Mrs. Lies Bamelis ([lba@unitedexperts.be](mailto:lba@unitedexperts.be)).

**Academic Supervisor :** Prof. Dr. Ir. J. Buysse ([j.buysse@ugent.be](mailto:j.buysse@ugent.be))

### **REQUIRED QUALIFICATIONS OF THE APPLICANTS:**

**Type of degree:** Applicants need to have an MSc degree in Environmental Science, Agronomy, Economics or similar.

#### **Skills and competences / experience:**

- Experience with economic modelling, futures markets, nutrient recovery will be an advantage. Good skills in data management and analysis.
- Strong communication (written and oral) and interpersonal skills.
- Experience with cross-disciplinary and/or multi-cultural collaboration will be an advantage.

#### **Tasks, responsibilities and opportunities of the ESR:**

- You perform independent scientific research within a collaborative international research consortium (the FertiCycle network).
- You get in contact and collaborate with the other members of this international consortium and will benefit from the tailored training programme.
- You participate in international secondments (internship as visiting researcher) to other organisations in the FertiCycle network.
- You deliver written reports of your research on a regular basis.
- You write and publish scientific articles related to the research project of the assignment.
- You support the valorization of research results into tangible deliverables
- You participate to scientific meetings and conferences to present your research to the scientific community.
- You actively participate in outreach activities aimed to promote your own scientific research as well as the FertiCycle network activities to a wider audience.
- You (may) contribute (limited) to teaching activities.

#### **Eligibility criteria**

In order for applicants to be eligible for this position, they have to fulfill certain criteria:

- H2020 MSCA Mobility Rule: applicants must not have resided or carried out their main activity (work, studies, etc.) in the country of the host organisation (in this case Belgium) for more than 12 months in the 3 years immediately before the recruitment date (start of contract). Compulsory national service, short stays such as holidays, and time spent as part of a procedure for obtaining refugee status are not taken into account.

- H2020 MSCA eligibility criteria: Early Stage Researchers (ESRs) must be, at the date of recruitment by the host organisation, in the first four years (full-time equivalent research experience) of their research careers and have not been awarded a doctoral degree. Full-Time Equivalent Research Experience is measured from the date when the researcher obtained the degree entitling him/her to embark on a doctorate (either in the country in which the degree was obtained or in the country in which the researcher is recruited, even if a doctorate was never started or envisaged).

### Terms of employment

The position is full-time (40 h/w) for 3 years.

Office location : at one of the offices of United Experts in Flanders (see website for more information).

### Application Procedure

The application, *in English*, must be submitted electronically [by clicking APPLY NOW](#).

### Please include

- Cover Letter, detailing your motivation and background for applying for this specific PhD project, incl. any earlier study or work experience relevant for the topic.
- CV
- Diploma and transcripts of records (BSc and MSc)
- Other information for consideration, e.g. list of publications (if any),
- Full contact details (Name, address, telephone & email) of 1-3 professional referees

**The deadline for applications is 14 April 2020, 23:59 CET (Brussels).**

### QUESTIONS

For more specific information about the PhD scholarship and the contents of the FertiCycle project, please contact Lies Bamelis ([lba@unitedexperts.be](mailto:lba@unitedexperts.be)) or Dirk Coucke ([dc@unitedexperts.be](mailto:dc@unitedexperts.be)) – by phone : +32 11 71 19 91.

General information about PhD programmes at The PhD doctoral school is available at <https://www.ugent.be/doctoralschools/en> .

More info on the FertiCycle European Training Network can be found at [www.ferticycle.ku.dk](http://www.ferticycle.ku.dk) (from 5 March 2020).

## INFO

Application deadline: 14-04-2020

Employment start: 01-09-2020

Working hours: Full time

Department/Location: choice out of the United Experts Offices, but preferably in Beringen (near Hasselt) or Wetteren (near Ghent)