

# PROJECT FACTSHEET

[www.list.lu/en/research/project/effo-1/?no\\_cache=1&cHash=93e900638f2570322a394d45a0ccc6a](http://www.list.lu/en/research/project/effo-1/?no_cache=1&cHash=93e900638f2570322a394d45a0ccc6a)

b

## EFFO

Setting-up a crop rotation system for oilseed rape to reduce the risk of potential groundwater contamination by herbicides and to increase biodiversity in agriculture.



### INSPIRATION

As an important crop in Luxembourg, winter oilseed rape is growing on 5.000 ha on average per year. Such a crop has many relevant benefits. It has reliable yields of approx. 42 dt/ha, it plays a key role as a break crop in cereal-based rotations, it is a significant food resource for insects and its continuous soil covering throughout the year prevents soil erosion. Despite all that, the winter oilseed rape crop has an Achilles heel. Its production is characterized by intense usage of fertilizers and pesticides.

Regular ground and surface water analysis in Luxembourg accurately identified a high level of contamination by transformation products of rapeseed specific herbicide compounds. It is thus quite natural that scientific, administrative and advisory institutions of the agriculture business gathered around a common ambition: reducing the risk of potential groundwater contamination from pesticides in Luxembourg.

### INNOVATION

Within the EFFO project, partners will first identify suitable cultivation techniques to reduce the amount of herbicides and highly mobile processing products used in areas dedicated to oilseeds, and secondly explore the potential substitutes such as oil-producing crops like flax or hemp, based on multi-side agricultural field trials.

In this project led by Fördergemeinschaft Integrierte Landbewirtschaftung, LIST experts in plant science and biotechnologies will be mainly responsible for the acquisition and scientific analysis of data. Those data sets will come from field trials carried out by the Chambre d'Agriculture on Luxembourg sites located in water protection areas, i.e. the region of the Upper-Sûre, in Bettendorf 's experimental trials and in classical oilseed rape cultivation areas.

### IMPACT

By 2020, at the end of the project, the efficient system of crop rotation will make it possible to develop solutions to reduce the contamination of drinking water by pesticide residues, in particular the metazachlor, and will optimize the way winter oilseed rape is growing thanks to a reduced use of herbicides. The partners also aim to put in place actions to prevent erosion and enhance biodiversity by enhancing the crop rotation with new crops like oil-producing flax.

More broadly, key findings of the project will be implemented into the education of young farmers within their studies at the Lycée Technique Agricole of Ettelbrück in Luxembourg.

### Partners

Fördergemeinschaft Integrierte Landbewirtschaftung (LU) , Chamber of Agriculture (LU) , Lycée technique Agricole (LU)

### Financial Support

Ministère du Développement durable et des Infrastructures , Ministère de l'Agriculture, de l'Alimentation et de la Viticulture , Ministère de l'Enseignement supérieur et de la Recherche

### Contact

5, avenue des Hauts-Fourneaux  
L-4362 Esch-sur-Alzette  
phone: +352 275 888 - 1 | [LIST.lu](http://LIST.lu)

Dr Michaël EICKERMANN  
([michael.eickermann@list.lu](mailto:michael.eickermann@list.lu))

© Copyright November 2024 LIST

LUXEMBOURG  
INSTITUTE OF SCIENCE  
AND TECHNOLOGY

