

## International Workshop

# Greenhouse Gas Emission from Oilseed Rape Cropping and Mitigation Options

Thünen Institute  
Braunschweig, Germany  
4<sup>th</sup> and 5<sup>th</sup> March 2015



In recent years there has been much political discussion in Europe regarding the advantages and disadvantages of biofuels, which cumulated in the EU Renewables Directive and its requirements for greenhouse gas (GHG) mitigation compared to fossil fuels. As a consequence, research on field emissions (in particular nitrous oxide) from oilseed rape cropping and life cycle assessment of rapeseed biodiesel has gained additional importance.

In order to foster international scientific exchange regarding research on the GHG balance of rapeseed, the Thünen Institute hosts a workshop on 4<sup>th</sup> and 5<sup>th</sup> March 2015 in Braunschweig, Germany. We will have invited experts from Canada and Europe.

The workshop will focus on the following topics:

- New results on N<sub>2</sub>O emissions from oilseed rape cropping (measurements and modeling)
- Management options to increase productivity of nitrogen fertilization in rotations with oilseed rape and to reduce N<sub>2</sub>O emission and nitrate leaching
- Influence of oilseed rape cropping on soil organic carbon stocks
- International knowledge exchange in the field of sustainable, resource-efficient production of oilseed rape
- International networking for future research on nutrient management and greenhouse gas mitigation in rotations with oilseed rape

**Wednesday, March 4<sup>th</sup>**

### **The EU Renewables Directive - challenges for oilseed rape production**

This introductory session summarizes the challenges of the EU Renewables Directive for oilseed rape production and it addresses the current methods to estimate greenhouse gas emission from oilseed rape production.

### **Direct N<sub>2</sub>O emission from oilseed rape cropping**

N<sub>2</sub>O emissions are a major quantity in the greenhouse gas balance of rapeseed products such as biodiesel. In this session recent results from field measurements are presented. Results from modeling approaches are also welcome.

### **How to minimize nitrate leaching after harvest of oilseed rape?**

This session focuses on optimized nitrogen fertilization, post-harvest management and cropping systems, which aim to minimize nitrate leaching after harvest of oilseed rape.

### **Workshop dinner**



**Thursday, March 5<sup>th</sup>**

**Influence of oilseed rape cropping on soil organic matter**

Results on the impact of rape cropping on soil organic matter stocks and soil carbon turnover are presented. Results from modeling and studies on new methods are also welcome.

**Management options to reduce yield related greenhouse gas emissions from oilseed rape cropping**

In this session promising strategies for mitigating GHG emissions are presented and discussed.

**Open Session on current research activities in different countries and future networking**



**Organizing committee:**

Heinz Flessa  
Thünen Institute of Climate-Smart Agriculture

Roland Fuß  
Thünen Institute of Climate-Smart Agriculture

Henning Kage  
Institute of Crop Science and Plant Breeding,  
Kiel University

Olaf Christen  
Institute of Agricultural and Nutritional Sciences,  
University of Halle-Wittenberg



The workshop is free of charge (dinner not included). All researchers with an interest in the GHG balance of oilseed rape cropping are welcome.

Please **register** by sending an e-mail with the subject line "Rapeseed workshop" to [roland.fuss@ti.bund.de](mailto:roland.fuss@ti.bund.de).

Include the following information:

Your Name,  
your Institution,  
the title of a talk you'd like to present.  
Do you intend to join us for dinner at a restaurant on March 4<sup>th</sup>?

**The registration deadline is 16<sup>th</sup> January 2015.**

We are looking forward to fruitful discussions with you.

The workshop is organized as part of the joint research project "Mitigation of greenhouse gas emission from rapeseed cultivation with special emphasis on nitrogen fertilization", which is funded by the Agency for Renewable Resources (FNR) due to a decision of the German Federal Parliament with funds of the Federal Ministry of Food and Agriculture (research grants 22403212, 22403312, 22403412, 22403512, 22403612, 22403712, 22403812, 22403912) and receives financial support from the Union for the Promotion of Oil and Protein Plants (UFOP).

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