

## BioGrace Newsletter #5 – February 2012

The EU funded project BioGrace (Contract No: IEE/09/736/SI2.558249) aims to harmonise calculations of biofuel greenhouse gas (GHG) emissions and thus supports the implementation of the Renewable Energy Directive (RED, 2009/28/EC) and Fuel Quality Directive (2009/30/EC) into national laws.

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### ❖ List of additional standard values

BioGrace has developed the BioGrace list of additional standard values for a number of inputs, process related emissions and transport modes not listed on the BioGrace list of standard values or which contain more specific values. This list shall offer an extended and more specified data background to the user. It contains data for selections of

- mineral fertilizer types and other agro inputs
- conversion inputs (process chemicals)
- national electricity grids
- solid and gaseous biomass sources for energy
- transport (pipeline).

According to the BioGrace calculation rules it is recommended to use these values whenever the BioGrace list of standard values does not contain the needed value. Deviations are only allowed on conditions laid down by the calculation rules.

The list is available online as an Excel sheet or as a pdf- document giving detailed information on system boundaries and data sources:

<http://www.biograce.net/content/ghqcalculationtools/additionalstandardvalues>.

## ❖ Version 4b of the Excel tool: final N<sub>2</sub>O calculation sheet

The calculation sheet for N<sub>2</sub>O field emissions has been finalised after receiving valuable feedback from stakeholders. This calculation sheet is an integral part of the BioGrace GHG calculation tool and follows the IPCC methodology. It had first been published as “work in progress” under version 4 of the tool. The new version now is numbered 4b. Improvement was obtained in two details:

- Emissions from below-ground crop residues from sugar beet were too high and have been corrected.
- As manure causes N<sub>2</sub>O emissions, a cell where users may insert the input of manure was added in the cultivation box of each biofuel pathway.

Another stakeholder comment was on the accumulation of N<sub>2</sub>O when the soil carbon stock increases due to improved agricultural management. According to the IPCC rules, however, accumulation shall not be taken into account.

The user manual, as a consequence, was extended by a chapter on the use of the N<sub>2</sub>O calculation sheet and re-numbered as version 1b. Likewise the BioGrace calculation rules had to be updated into version 1b in order to clarify when to use the additional standard values. The most important supplementary point is on the use of the standard values for fertilizers as the lists are giving an average value (BioGrace list of standard values) as well as type specific values (BioGrace list of additional standard values).

The complete BioGrace Excel greenhouse gas emission calculation tool Version 4b now figures:

- the 22 biofuel production pathways given in the RED
- a calculation sheet on annualised emissions from carbon stock changes caused by land use change
- a calculation sheet on emission saving from improved agricultural management
- the described sheet for the calculation of N<sub>2</sub>O field emissions
- the BioGrace calculation rules
- the user manual.

It is available as a zip-download on our Website.

<http://www.biograce.net/content/ghgcalculationtools/excelghgcalculations>

### ❖ Calculation rules translated

The BioGrace calculation rules have been translated into French, German, Greek and Spanish.

[http://www.biograce.net/content/ghgcalculationtools/calculation\\_rules](http://www.biograce.net/content/ghgcalculationtools/calculation_rules)

### ❖ Spanish GHG calculator “Calcugei” published

The Spanish GHG calculator was commissioned by the state-owned Spanish Institute for Energy Diversification and Saving (IDAE) and developed by the Spanish BioGrace partner Research Centre for Energy, Environment and Technology (CIEMAT). The calculation rules of “Calcugei” and BioGrace are identical.

The national GHG calculators are designed to be user-friendly as economic operators may insert their individual input values into a preset template, which is adjusted to local production characteristics. In contrast to the BioGrace Excel tool above, the national calculators do not give all details about the GHG calculation, and do not allow for designing own calculations.

<http://www.biograce.net/content/ghgcalculationtools/nationalghgcalculators>

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