**Minutes DairyCap modeler’s teleconference**

**02 November 2015**

Present: Peter Vadas, Richard Gaillard, Curtis Jones, César Izaurralde, Al Rotz, Bill Salas, Karin Veltman, Olivier Jolliet

Unable to attend: Carolyn Betz

**Scheduled future meetings**

* **Friday November 20, 11.45am Eastern time** (10.45am Central time)
* **Thursday December 10, 1 pm Eastern time** (12.00 noon Central time)

**Action points**

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| **Who** | **What** | **When** |
| Peter | Contact Carolyn to organize teleconference with LCA team | Today (02 Nov) |
| Curtis + Richard | Inform modelers on how to proceed with the field measurement data, and the model comparison to measurement data | Early this week (when all data is received) |
| All modelers | Sign data request form sent out by Richard | ASAP |
| All modelers | Sent input and output files used for the final run for the Twin Birch farm to Karin, including a description on which model version was used. | Before Monday 16 Nov. |

**Agenda**

1. Additional runs for Twin Birch farm (DayCent and ManureDNDC)
2. Sensitivity study – choice of alternative scenario’s for feed/manure handling/ field management
3. Experimental comparison

**Short summary of call**

1. **Additional runs for Twin Birch farm**

Richard has provided additional simulations for the Twin Birch farm. As discussed in previous meeting, the amount of N in manure applied on the field was reduced in DayCent simulations, as Daycent does not simulate NH3 volatilization from surface applied manure. Reducing N in manure applied assures that DayCent predictions for the field are comparable with predictions from the other models (that do simulate NH3 volatilization).

In addition, Richard has contacted DayCent people regarding the observed high N leaching rate. He received a new file from them with lower leaching rates. Using these lower leaching rates in the Twin Birch farm simulation results in a reduced leaching of N.

It is discussed which DayCent simulation, reduced N in manure or not reduced N in manure; and high leaching rates or low leaching rates, should be used as a default simulation in the manuscript. It is concluded that the ‘reduced N, low leaching rate’ simulation will be used in the manuscript. In the methods section of the manuscript, it will be explained why the reduced N scenario is used as a default for DayCent.

1. **Scenario**

Olivier: Can we go ahead with the scenario study, i.e. in parallel to the model comparison to field measurements? How do we proceed with defining alternative scenarios?

Peter: We can go ahead, but we should coordinate with the LCA team and discuss with the LCA team what their specific needs are.

It is concluded that Peter will contact Carolyn today (02 Nov) in order to organize a teleconference with the LCA team and identify their interests and needs.

Short discussion on what objectives from modelling team are.

Olivier: Objective from our side is to reduce GHG emissions, without increasing losses in other places. Peter: identify management options to to control the fate of the nutrients in terms of where the losses occur.

Cesar: an objective is to increase the circulation of nutrients within the system, this would decrease the losses and simultaneously reduce the need for nutrient inputs into the system.

Al: In IFSM, we can calculate a reactive N footprint. An objective is to minimize the overall reactive N footprint of the system. Reactive N footprint is calculated as the sum of all reactive N lost / amount of milk produced. (IFSM can also account for pre-chain losses, such as reactive N losses associated with purchased feed. This is partly calculated based on GREET model).

1. **Field measurement**

Curtis gives a small update on the status of the ‘model comparison to field measurements’ project. Curtis and Richard have contacted Carol Barford to streamline the data request process. It is agreed upon with Carol, that Richard will make a data request for all modelers and all data will go to Richard. However, all modelers still need to sign the data request form sent out by Richard, so that Richard can sent the data to the individual modellers! Richard will process the data, i.e. put all data in the same format. Curtis and Richard will inform the group early this week on the next steps in the model comparison project. Curtis and Richard will present the data to the whole group once they have received and processed all field data. The data for the barn and manure will come in a later stage.