ICOS BELGIUM CONSORTIUM STUDY DAY

Antwerpen, 20 April 2015

La Robinette (RTO)

Lonzée (LTO)

Dorinne (DTO)

Vielsalm (VTO)
ICOS-WB Terrestrial Observatories: State of the art

Lonzée (LTO)
Crop rotation
EC Since 2004
ICOS upgrade (L2): 01/14 (EC); 12/14 (meteo)

Vielsalm (VTO)
mixed mature forest
EC Since 1996
ICOS upgrade (L2): 04/14 (EC); 03/15 (meteo)

La Robinette (RTO)
Young mixed forest
EC 2007-2012
ICOS upgrade (L2): 06/15 (tower); Fall/15 (EC)
Structure ICOS-WB : Task mutualisation

Flux data ; Micrometeorology ; Data quality check;

Biomass sampling and treatment; biometric data

Lonzée (LTO)  
Site Coordinator :  
C. Moureaux

Vielsalm (VTO)  
Site Coordinator :  
C. Vincke

La Robinette (RTO)  
Site Coordinator :  
M. Carnol
Flux data; Micrometeorology; Data quality check

- Done:
  - Upgrade of LTO
  - Upgrade of VTO
- In progress:
  - Upgrade of RTO
  - Data quality check procedure
  - Harmonisation of historical data (VTO, LTO)
  - Preparation of a scientific paper on IRGA protocol
Biomass sampling and treatment; biometric data

- Done:
  - Sampling plots installation (3 sites)
  - Sampling treatment laboratory ready (washing, grinding, drying, storage)
  - Biomass inventory (VTO, RTO)
  - Biomass sampling (LTO)
- In progress:
  - Sampling at all sites (2015)
  - Participation to sampling protocols
Participation to ICOS ETC / MSA

- Coordination of IRGA ICOS Protocol
- Participation to other protocols (storage, micromet, …)
- Participation to biomass sampling protocols
Vielsalm – Additional recent and future activities

- Water Balance (Sap flow, Eddy covariance, Modelling, Soil water content); Rémy Soubie (FRIA)

- Comparison between different methods of phenology analysis;

- Interannual variability of carbon sequestration (18 years); Quentin Hurdebise.
Vielsalm – Additional recent and future activities

- BVOC measurement campaigns (in coll. with BISA); **Quentin Laffineur** (BELSPO)

- Soil CO$_2$ efflux, soil CO$_2$ profiles and isotopes (coll. INRA, Univ Freiburg); **Stéphanie Goffin**. (FRIA).

- Methodological considerations (data quality).
Lonzée – Additional recent and future activities

- Carbon balance of crop rotation (Christine Moureaux) (ARC)
- Discrimination of TER between autotrophic and heterotrophic components; (Marie Suleau). (ARC)
- Soil sampling (Phenology Underground – J Weedon, UA coord);
- BVOC measurement campaign (coll. BISA,); Aurélie Bachy. (FNRS)
Lonzée – Additional recent and future activities

- **N2O measurements**
  - QCLAS validation (coll. Univ. Reims); Giovanni Salerno (PHC)
  - Chamber measurements ;(AgriGES program); Donat Regaert (ARC)
- Continuous EC measurements (NO(EC)2 project. (FNRS); Margaux Lognoul
La Robinette – Additional activities

- Deposition and losses of nutriments and DOC;
- Nutriments and DOC in soil solution and at outlet;
- Soil respiration;
- Nutriment deposition through litter;
- Soil Carbon content;
- Biogeochemical processes;
- Critical Load assessment;
- Biological indicator of soil quality.
Non ICOS site: Grazed Grassland at Dorinne (SPW DG03)

- EC and micrometeorological measurements; Ossénatou Mamadou, Elisabeth Jerôme (SPW)
- Impact of grazing on net ecosystem exchange; Elisabeth Jerôme (SPW)
- Grassland Carbon Balance;
- Impact on GHG emission of grazing management. Louis Gourlez de la Motte.
- Methane emission by cows in the field; Pierre Dumortier (ARC)
- BVOC emission by grassland (coll. BISA,); Aurélie Bachy (FNRS)