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Presentation of CRA-W
Walloon Agricultural Research Centre

Overview of the activities of
Agricultural Product Quality Department
Walloon Agricultural Research Centre
(Gembloux)

- Founded in 1872
- Public Interest Organisation (OIP)
- Under the Regional Government of Wallonia.

http://www.cra.wallonie.be/
CRA-W’s missions

«CRA-W has the mission to assist the Government in the definition and the development of a integrated and concerted policy in agricultural Research». (Walloon Decree of 3 July 2004)

To accomplish this mission, CRA-W has in charge of:
  * fundamental researches,
  * applied researches,
  * service activities.
CRA-W : multidisciplinary approaches

- Genetic Resources and plant breeding
- Crop production techniques
- Biodiversity
- Plant protection
- Agricultural equipments
- Animal Production and welfare
- Sustainable ecosystems
- …
- Quality, traceability, food safety
- Valorisation of agricultural productions
- Development of analytical methods
- …
Biometry, Data Management and Agrometeorology

Biotechnology

Agricultural Engineering

Biological Control and Plant Genetic Resources

Pesticide research

Crop production

Animal Production and Nutrition

Quality of Agricultural Products

Agricultural Systems (Libramont)

Personnel: ~450, Scientists: ~120

www.cra.wallonie.be

Activity reports
CRA-W budget: 33,038,000 € (2005)

- Project contracts: 11,200,000 €
  - DGA-RW
  - SPF-Santé Pub.
  - SSTC - BFSPO
  - EU
  - Private
  - ...

- Regional subvention: 16,875,000 €

- Service incomes: 4,963,000 €
  - 51%

- 34% Service incomes
  - 15%

- 13,597,000 € = Personal salaries (80%)
- 2,280,000 € = Operational costs
- 890,000 € = Investment cost (e.g. equipment) (3%)
- 108,000 € = Various

Buildings and permanent facilities excluded!
Quality of Agricultural Products Department

3 laboratories:

- **Microbiology & Molecular biology**  
  *Dr Gilbert Berben*

- **Analytical chemistry & Technology**  
  *Dr Georges Sinnaeve*

- **Spectroscopy & Chemometrics**  
  *Dr Vincent Baeten*

58 employees - 17 scientists
Microbiology & Molecular biology  

Dr Gilbert Berben

Molecular biology used in safety and authentication items:

• DNA & protein-based detection of animal protein in feedingstuffs – development and validation of methods (CRL, SAFEED-PAP, FARIMAL)

• GMO detection in food, feed and seed - development and validation of methods with emphasis on enforcement purposes (routine analyses, Co-Extra, member of the Belgian NRL consortium, member of ENGL)

• Search of transgenic rapeseed in the environment of the Walloon Region (Walloon Region call)

• Search by AFLP of molecular markers for bovine breed characterization (TRACE)

Microbiology : dairy starters and their valorisation:

• Characterization of the microbiological consortium of the department’s kefir grain and assessment of its use as probiotic for livestock production
Analytical chemistry & Technology  Dr Georges Sinnaeve

• Animal and plant products: determination of the composition (DM, Protein, fat, fatty acids ... ) to support field trials – Milk Analysis (national guidance)
• Technological and physico-chemical properties of plant products (wheat and rye)
• Reference methods for the development and maintenance of NIR, MIR and Raman calibrations
• Development of methods for the determination of food and feed contaminants (mycotoxins, antibiotics, heavy metals...)
• Techniques involved: pH metry, rheology, GC, GC-MS, LC, LC-MS-MS, ICP ...
Spectroscopy & Chemometrics  Dr Vincent Baeten

• Development of spectroscopy methods (NIR, MIR and Raman) for food/feed quality and safety
• Setting up of spectral data bases, calibration development and maintenance of spectrometer networks (e.g. INGOT, PROVIMI, REQUASUD)
• Testing and development of chemometrics methods
• Detection of animal protein in feedingstuffs (CRL, SAFEED-PAP, FARIMAL)
• Development of web-based tools (e.g. web-site, database management)
NIR INSTRUMENTS – CRA-W

• 1976  R. Biston au CRA – Station de Haute Belgique

• 1979 Neotec FQA51 (Feed Quality Analyser)
NIR INSTRUMENTS – CRA-W

• 1981 Neotec 6350 (Research Analyser) + Nova III

John Shenk when I got my first 386: “Pierre, it will allow you to make mistakes faster”
Quality Dpt and European Projects

• FLAIR-QUEST Concerted Action n°1, COST 901: “Spectroscopic techniques (NIR, NMR, FTIR) for rapid food quality assessment” (1990-1995)

• STAFANIR (SMT4-CT96-2102): “Standardisation of food analysis by NIR” (1995-1998)

Quality Dpt and European Projects

• STRATFEED (G6RD-CT-2000-00414)

• MEDEO (G6RD-CT-2000-00440)

Quality Dpt and European Projects

• TRACE (IP, 6FWP) “Tracing Food Commodities in Europe” (2005-2009)

• CO-EXTRA (IP, 6FWP) “GM and non-GM supply chains: their CO-EXISTence and TRAceability” (2005-2009)
Quality Dpt and European Projects

