

Policies of ICAR about Milk Analysis Aspect



Andrea Rosati

The Importance of Milk Analysis

- Importance since the beginning (European Milk and Butter Committee, 1951)
- Economic value of milk constituents
 - Difference between Protein and Fat
 - Payment to farmers
 - Genetic indexes
 - Cheese making industries
 - Other constituents



The Importance of Milk Analyzers Test

- Development of instrumental analytical methods
- From about 20/40 analysis/day/person to 500 analysis/hour/instrument
- From:
 - test only to assess performance characteristics and practicability for laboratories
- To:
 - harmonization protocol for milk records purposes



The Importance of Milk Analyzers Test

- Detailed requirements for harmonization protocol
- Proposal from the working group MTL to grant world wide valid approval of instruments/methods
 - Documents submitted on 2002
 - Support in the Sousse biennial meeting (2004)
 - Board approval on 2006 - Submission to the General Assembly
 - Beginning on 1st July 2006



The Importance of Milk Analyzers Test

- Request by manufacturers or by any ICAR Member Organization
- National approvals
- Three different countries approval



The Importance of Harmonization of Laboratories Performance

- ICAR efforts for harmonization of milk recording
- The MTL has been a great source of harmonization and of exchange of information and expertise among laboratories
- The importance for genetic evaluation



High Laboratories Performance Working Standards

- ICAR MTL working group activities help every laboratories participating to the network to improve their performance
- The accuracy of milk constituents analysis has been improved in the last years due to:
 - technological improvements
 - improvement of technicians' skills
 - higher expectations from farmers and industries



From Working Group to Sub-Committee

- ICAR working groups objectives are finalized to a specific and not perpetual tasks
- ICAR Sub-Committees objectives are related to permanent services for members
- Actual Sub-Committees are: Identification, Interbull, Recording Devices



From Working Group to Sub-Committee

- ICAR MTL working group is already giving permanent services to ICAR members
- More services are planned for the future
- Board decision to be endorsed by the General Assembly



From Special Stamp to Quality Assurance: Reasons for Change

- Changing membership profile
- Members changing requirements
- Greater emphasis on visible quality assurance building on ICAR's reputation
- Maintaining ICAR standards
- Relevance to members' actual activities



Process

- Certificates will be valid for 3 years
- A panel of ICAR auditors
- On-site inspection for alternate certified periods
- Prompt feedback to members
- Paid-for service
- 2009



The Impact on the Laboratories Activities and Services

- Auditors' visits requested by member organizations for specific activities and species:
 - identification, recording, genetic evaluation
 - dairy cattle, beef cattle, sheep, goats, buffalo
- Auditors' visits will advise and check on guidelines application
- The Sub-Committee must constantly update the guidelines to technical and organizational evolution



The Future: a network (1)

- Creation of a network of labs based on several levels:
 - 1st level: national (or organizational) reference laboratories harmonized by the ICAR International Ring Test
 - 2nd level: local laboratories harmonized by national (or organizational) Ring Tests
 - 3rd level: ...
- Objective: every laboratories working for ICAR member organizations must be in a network



The Future: new analyses (2)

- New traits, or milk constituents, for large variety of objectives:
 - herd management
 - cheese industries
 - cows metabolic diseases
 - cows nutrition
 - drugs presence
 - ...
- New standards for Ring Tests and for milk analyzers approval tests



The Future: In-Line Analyzers (3)

- New technologies for in-line analyzers
- Commercial diffusion of in-line analyzers
- Calibration of in-line analyzers
- Somatic cells counts issue
- Checking of working standards of in-line analyzers
- Joint activities with Recording Devices SC
- Entire herd management system test



The Future: Information Network (4)

- Full use of the MTL pages in the ICAR website:
 - guidelines
 - exchange of technical information
 - information about approved milk analyzers
 - milk laboratories participating to the Ring Tests
 - Participation of private industries
- Books, proceedings, technical articles, meetings, workshops, ...
- Job posting, announcements, people facts, ...



The Future: Large Farms (5)

- New and efficient milk analysis technologies for large farms:
 - fast
 - cheap
 - relevant
 - immediate response
- Easy farmers sampling collection
- In-house laboratory:
 - harmonization of instruments and working standard (lower level Ring Test)
 - service to farmers



The Future: Long Term Vision (6)

- DNA analyses from milk samples:
 - Information about cows genotypes (defects, production levels, disease predisposition, ...)
 - Joint actions with DNA laboratories
 - Food traceability
 - Cow identification
- Detection of specific residuals:
 - environmental detection tool
 - food safety sentinel



Summary

- Milk analyzers test
- Harmonization of laboratories standard
- From working group to Sub-Committee
- From Special Stamp to Quality Assurance
- The Future:
 - network
 - new analyses
 - in-line analyzers
 - information tools
 - large farms
 - the way beyond



**Thanks for Your
Attention!**

