



Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Federal Department of Economic Affairs DEA
Agroscope Liebefeld-Posieux Research Station ALP

Tasks of NRL and role of ALP

Thomas Berger

01. October 2008



ALP

Agroscope

The Swiss Agricultural Research Stations

Our vision

Agriculture for man and the environment

We do research to the advancement of
healthy food and sustainable landscapes
worth living in



ALP

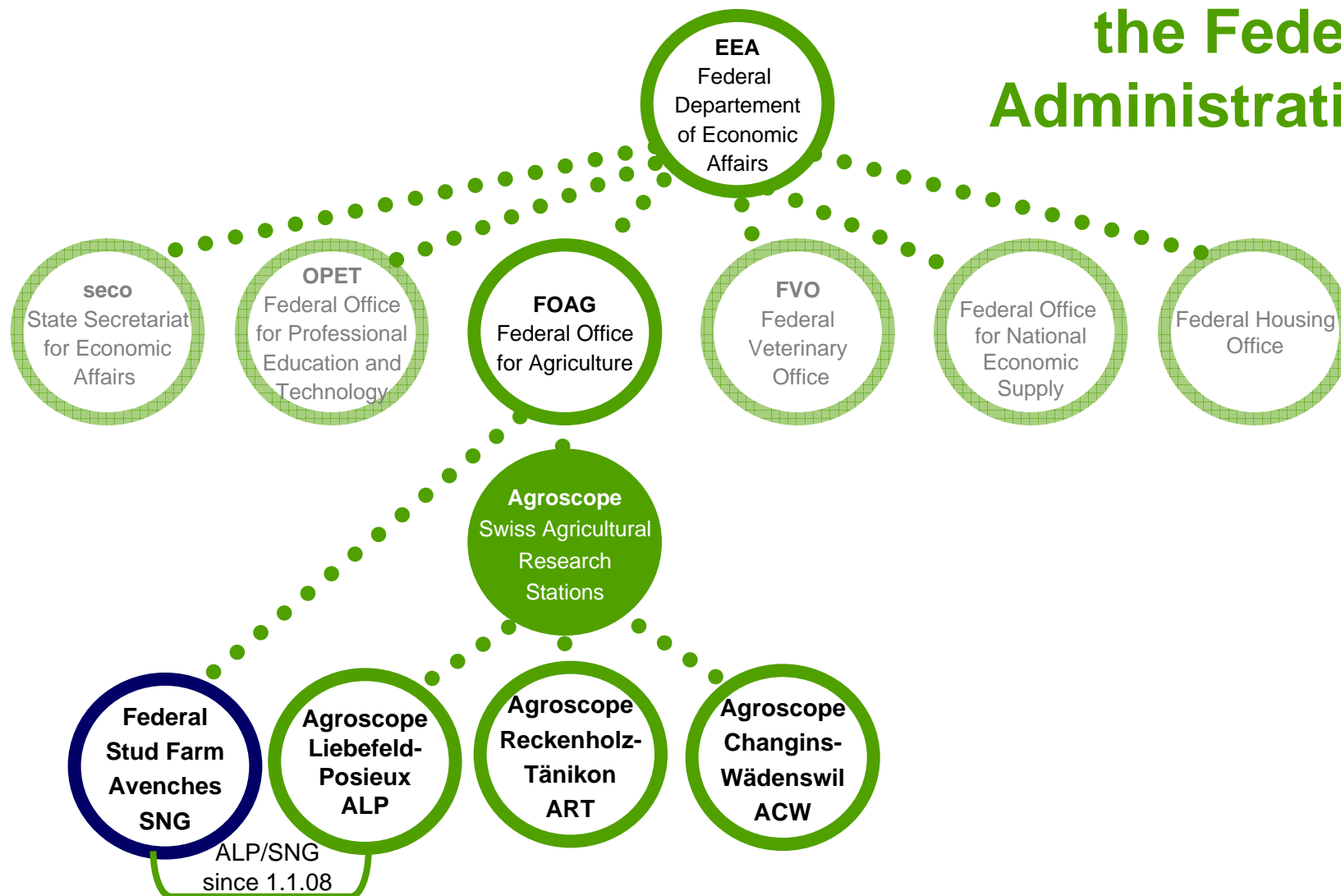
Agroscope Liebefeld-Posieux ALP





ALP

ALP within the Federal Administration





ALP

Competence/Expertise: From Animal Fodder to Comestible Food





ALP

Organisation ALP





ALP

ALP product 3: “Safety & Quality“

Research priorities for 2008 - 2011



- Official feed inspection
- Bases for enforcement support and National Reference Laboratory

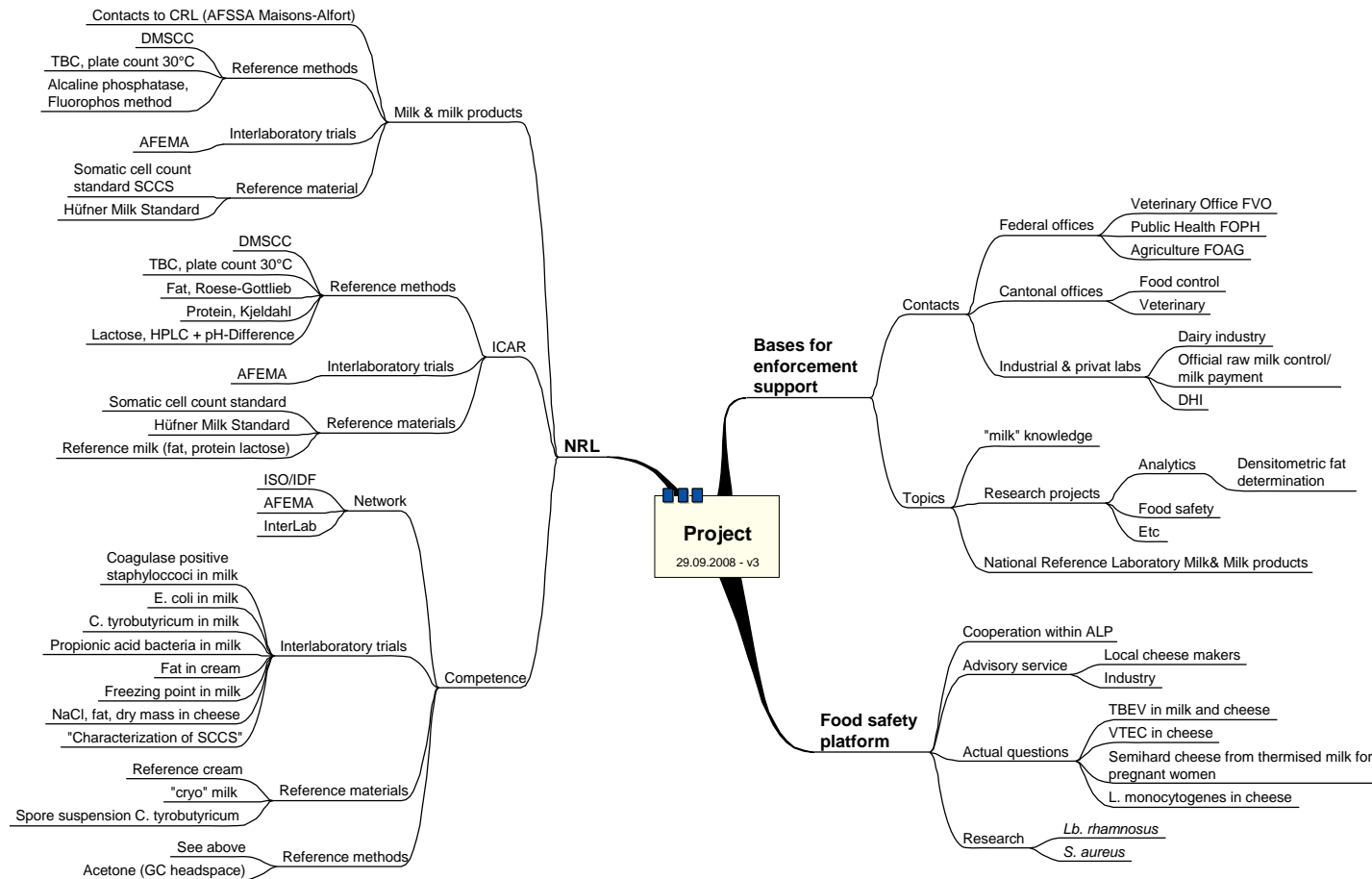
- Quality support
- Bee research





ALP

• Bases for enforcement support and National Reference Laboratory





NRL

Types of NRL

public law approach → EU legislation
(e.g. NRL milk & milk products)

private law approach → national or international
organizations (e.g. ICAR)

competence approach → customer confidence/public
acceptance (accreditation, e.g.
fat, protein)



Legal aspects & CRL

EU legal basis	Community Reference Laboratories (CRL) [RG 378/05, RG 882/04]		National Reference Labs (NRL CH)		
RG 90/424 funding	A. biological risks	Antibiotic resistance, ?			
		Campylobacter, ?	<i>Inst. f. Food safety and –hygiene, Vetsuisse Faculty, Zürich</i>		
		E. coli, ?			
		Koagulasepositive Staphylococci <i>AFSSA-LERQAP, Maisons-Alfort (FR)</i>			
		Listeria <i>AFSSA-LERQAP, Maisons-Alfort (FR)</i>	<i>Centre National de Référence des listérias (CNRL), Centre Hospitalier Universitaire Vaudoise (CHUV), Lausanne</i>		
		Parasites (e.g. Trichinella), ?	<i>Inst. f. Parasitology, Vetsuisse Faculty, Bern</i>		
		Salmonella <i>Rijksinstituut voor Volksgezondheid en Milieu (RIVM), Bilthoven (NL)</i>	<i>NENT (National Centre f. enteropathogenic bacteria), Cantonal hospital, Lucerne</i>		
		Milk and Milk products (SCC, TBC, ALP) <i>AFSSA-LERQAP, Maisons-Alfort (FR)</i>	<i>Agroscope Liebefeld-Posieux, Liebefeld site</i>		
		TSE <i>Veterinary Laboratories Agency, Addlestone (UK) ?</i>	<i>NeuroCenter, University Bern</i>		
		Marine biotoxines <i>Ministerio de Sanidad y Consumo, Vigo (ES)</i>			
		Bacteria + Viruses in bivalve molluscs <i>Centre for Environment, Fisheries and Aquaculture Science, Weymouth (UK)</i>			
		RG 96/23 residues	B. feed	Additives incl. "meat and bone meal (MBM)" <i>Joint Research Centre of the European Commission (JRC), Institute for Reference materials and Measurements, Geel (BE)</i>	<i>Agroscope Liebefeld-Posieux, Posieux site</i>
				Pesticides, PcB (organochlorine compounds including PcBs, organophosphorus compounds) <i>Instituto Superiore di Sanità (ISS), Roma (IT)</i>	
		RG 882/04 hygiene	C. Chemical risks	Mycotoxins <i>Rijksinstituut voor Volksgezondheid en Milieu (RIVM), Bilthoven (NL)</i>	
Chemical elements (heavy metals) <i>Instituto Superiore di Sanità (ISS), Roma (IT)</i>					
Anabolica, veterinary drugs (Stilbenes, stilbene derivatives, and their salts and esters; Antithyroid agents; Steroids; Resorcylic acid lactones including zeranol; sedatives) <i>Rijksinstituut voor Volksgezondheid en Milieu (RIVM), Bilthoven (NL)</i>	<i>Office for health and consumer protection, St. Gallen</i>				
Veterinary drugs and environmental contaminants (Antibacterial substances, including sulphonamides, quinolones; dyes; carbadox and olaquidonx) <i>AFSSA Laboratoires d'études et de recherches sur les médicaments vétérinaires et les désinfectants, Site de Fougères (FR)</i>	<i>Service de la consommation et des affaires vétérinaires, Genève Cantonal Laboratory, Zürich</i>				
Anabolica (Beta-agonists), veterinary drugs (Anthelmintics, Anticoccidials, including nitroimidazoles, Non-steroidal anti-inflammatory drugs [NSAIDs]) <i>Bundesamt für Verbraucherschutz und Lebensmittelsicherheit (BVL), Berlin, (DE)</i>	<i>Office for health and consumer protection, St. Gallen</i>				
Veterinary drugs (Carbamates and pyrethroids) <i>Instituto Superiore di Sanità (ISS), Roma (IT)</i>	<i>Office for health and consumer protection, St. Gallen</i>				

RG 1829/03, Genetically modified food and feed: *Joint Research Centre of the European Commission (JRC), Institute for Reference materials and Measurements, Geel (BE)*



NRL

Tasks of CRL Milk & Milk products

RG 882/04, Article 32

1. The CRLs for feed and food shall be responsible for:
 - (a) providing NRLs with details of **analytical methods**, including reference methods;
 - (b) coordinating application by the NRLs, in particular by **organising comparative testing ...**;
 - (c) coordinating practical arrangements needed to apply **new analytical methods**;
 - (d) conducting initial and further **training courses** for the benefit of staff from NRLs ..;
 - (e) providing **scientific and technical assistance to the Commission ...**;
 - (f) collaborating with laboratories responsible for analysing feed and food in third countries.



NRL

Tasks of NRLs Milk & Milk products

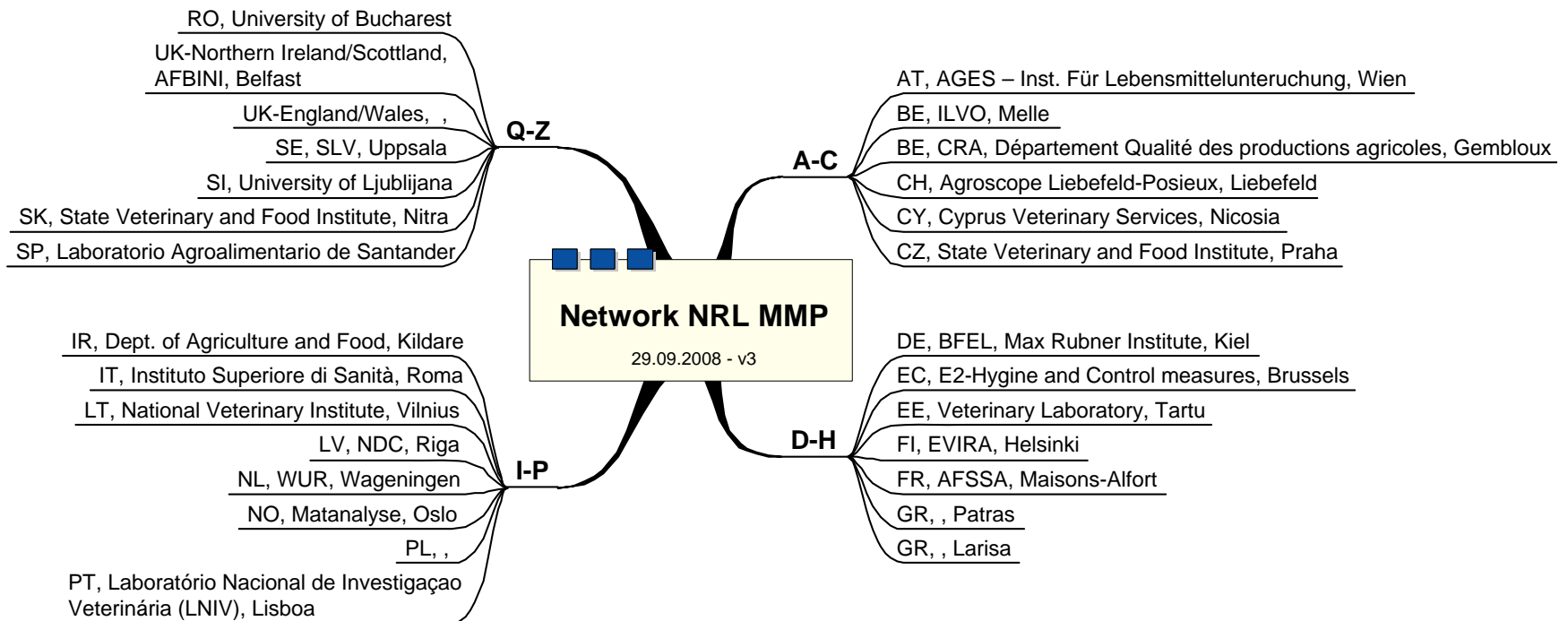
RG 882/04, Article 33

1. Member States shall arrange for the **designation** of one or more NRL for each CRL ... a single laboratory may be the NRL for more than one Member State.
2. These national reference laboratories shall:
 - (a) **collaborate with the CRL** in their area of competence;
 - (b) **coordinate the activities of official laboratories** ...;
 - (c) where appropriate, **organise comparative tests** between the official national laboratories ...;
 - (d) ensure the **dissemination to the competent authority and official national laboratories** of information that the CRL supplies;
 - (e) **provide scientific and technical assistance** to the competent authority for the implementation of coordinated control plans ...;
4. Member States shall communicate the name and address of each NRL to the CRLs and other Member States.



NRL

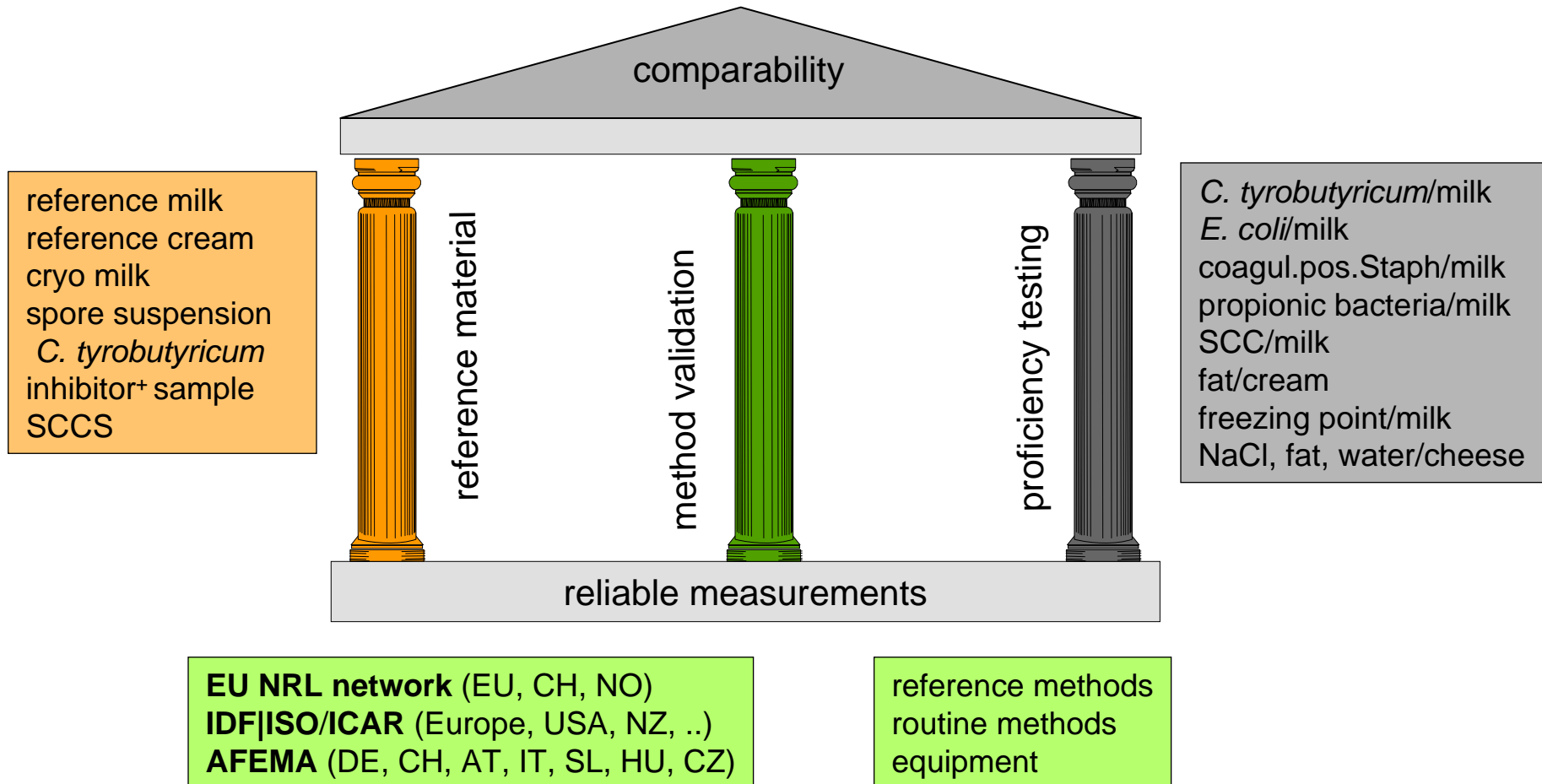
Network of NRLs Milk & Milk products





NRL

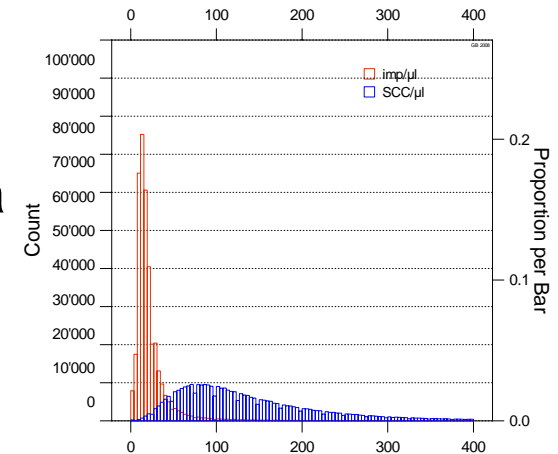
Comparability of measurements





Studies

- Evaluations of official Swiss raw milk data
- Calibration and verification of the butyrometric determination of fat
- Development of a densitometric determination of fat in milk and milk products
- Development of methods for Nisin und Lysozyme using HPLC and LC-MSⁿ
- National conversion factor for TBC (BactoScan FC)
- Calculation of milk density from fat/protein/lactose content applying a Canadian model
- Alkaline Phosphatase Activity in Swiss Ewe's and Goat's Milk





NRL

training courses 2000 - 2008

- 2000 infrared equipment for laboratory technicians (together with Gerber Instruments)
- 2001 thermistor cryoscopy (together with Gerber Instruments)
- 2002 proficiency testing and ring trials
- 2003 measurement principals for BactoScan 8000/FC and IR/FT-IR (together with FOSS, Delta Instruments, Gerber Instruments)
- [2008 sampling in milk and milk products]



NRL

TC for official raw milk control

- Participants from:
 - Federal Veterinary Office (FVO, chair)
 - Federal Office for Agriculture (FOAG, data)
 - Agroscope Liebefeld-Posieux (NRL, scientific support)
 - Fromarte (cheese makers, data, payment)
 - SMP (milk producer, data, payment)
 - VMI (milk industry, data, payment)
 - Qualitas AG (laboratory, Swiss Brown)
 - SuisseLab AG (laboratory, Simmental-Fleckvieh)
 - TSM (trust company for milk data and payment)
- Topics:
 - technical support and supervision (methods, sampling)
 - funding



NRL

Cooperation in Swiss food manual

Expert group Milk & milk products

- René Badertscher
- Thomas Berger

Expert group microbiology

- Jörg Hummerjohann

Advisory board Swiss food manual

- Thomas Berger



NRL

National sampling plan / hygiene monitoring milk & milk products

- managed by Federal Veterinary Office
- practical works by Cantonal Chemists
- risk assessment 2001
- sampling, data evaluation, publication 02/03 ✓
- sampling, data evaluation, publication 04 ✓
- sampling, data evaluation, publication 05 ✓
- sampling, data evaluation, publication 06 ✓
- sampling, data evaluation, publication 07 ✓, new Swiss hygiene regulation (equivalent with regulation 2073/2006)
- risk assessment 2007
- sampling 08, design 09
- use of information in official inspection and by advisory services