



**ICAR**  
Chile 2016



# Implementing milk recording in developing countries

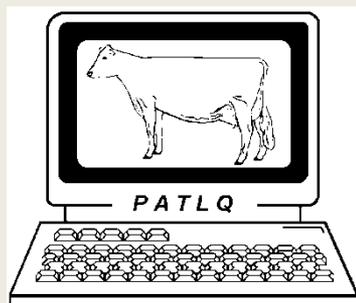
Humberto Monardes  
McGill University - Valacta  
Canada



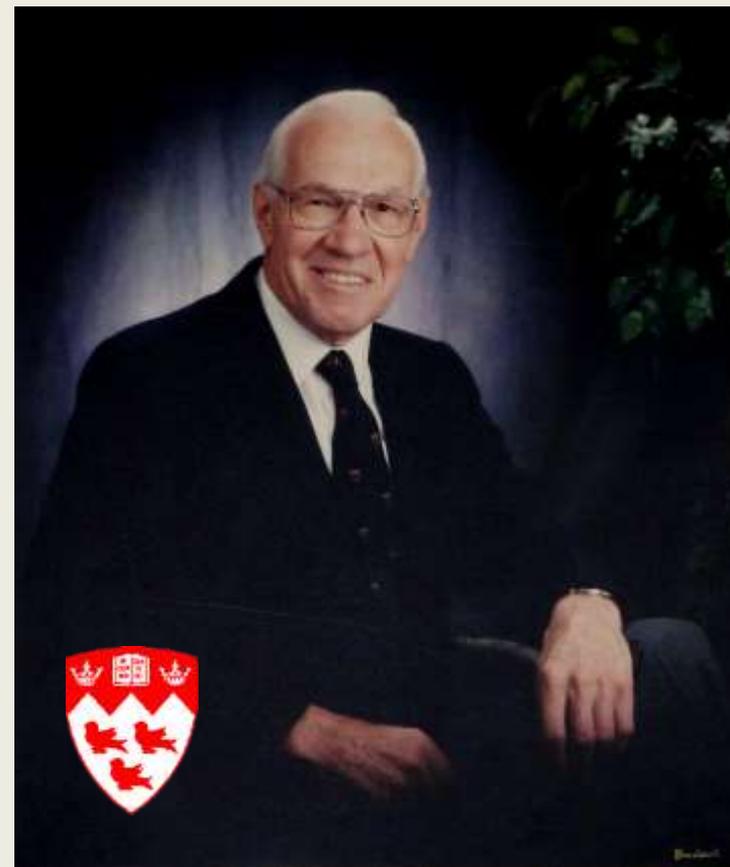
**McGill**  
UNIVERSITY



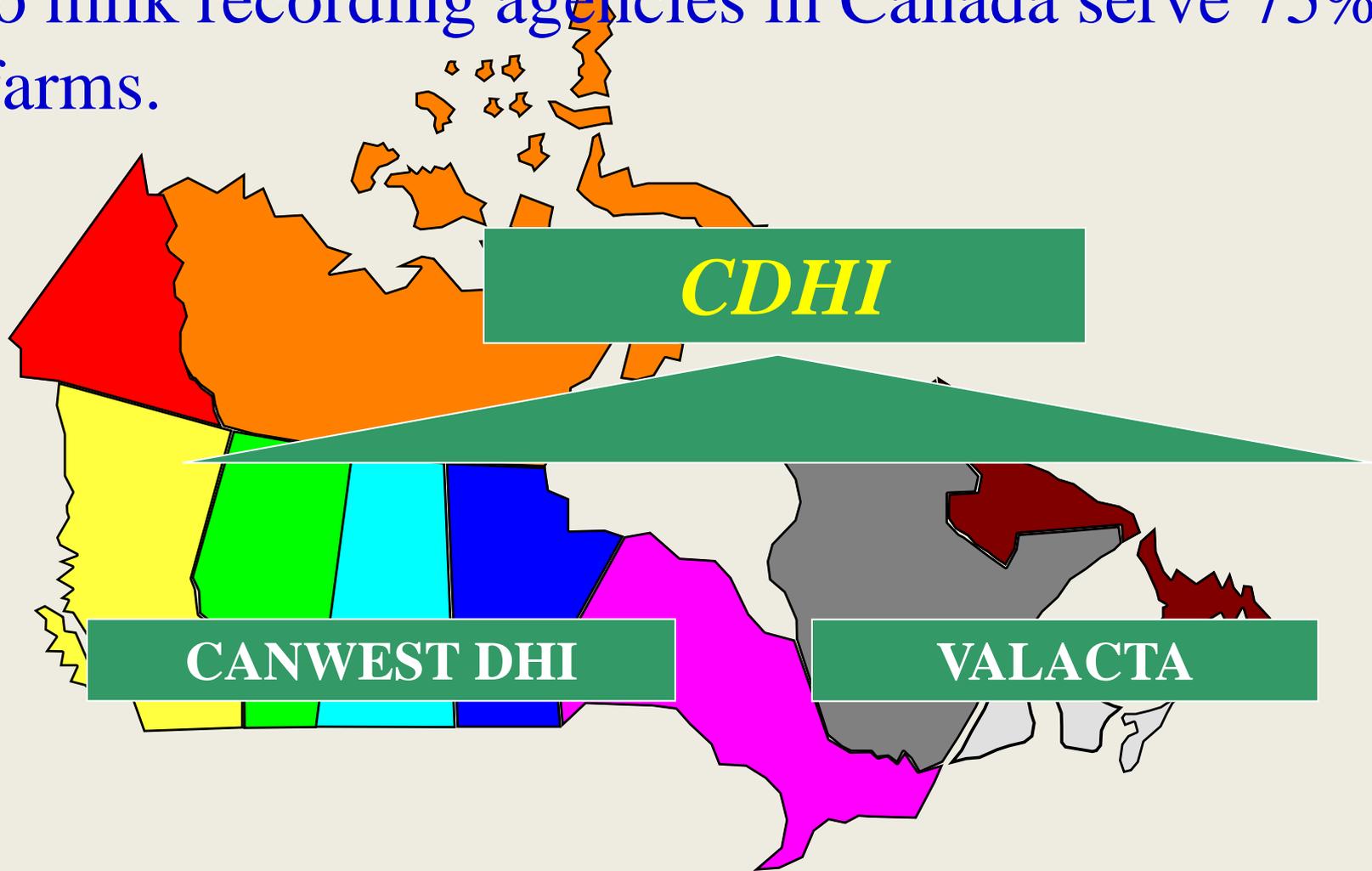
Originally, Valacta was named  
PATLQ/QDHAS: Quebec Dairy Herd  
Analysis Service



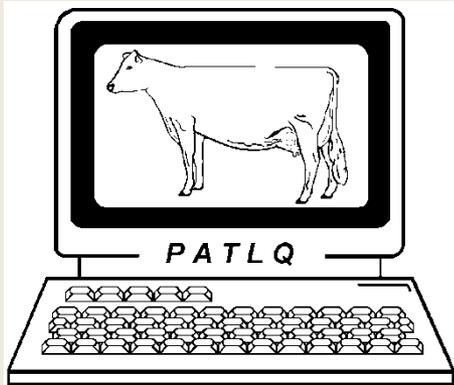
It was a milk recording agency,  
founded in 1966 by Dr John E. Moxley,  
Professor of Animal Genetics at McGill  
University



Two milk recording agencies in Canada serve 75% of farms.



Since 1998, the Canadian agencies work in partnership under the name *Canadian Dairy Herd Improvement (CDHI)* and one program, Vision 2000



2006

valacta

Valacta is a Centre of Expertise in  
Dairy Production that belongs to producers

# **Key milk recording elements at Valacta**

- 1. Routine measurement of performance indicators in animals**
- 2. Recording data collected in the field**
- 3. Data analysis and processing**
- 4. Data Interpretation**
- 5. Use data for management decision making**

- 215 Field staff (4 regions)
- 35 Laboratory
- 21 IT + Customer Service
- 15 Administration (incl. HR, Communication and QA)
- 15 R&D

~300  
employees





- Individual cows' milk
- Feed analysis
- Milk quality
- Reference lab
- Bulk tank milk for payment

• **ISO 17025** accredited



Canadian milk recording and its associated activities has helped to take Canada from a discreet place in the world dairy industry 50 years ago, to a world leadership in productivity, quality of dairy products, industry performance and rural equity.



Ukraine



Valacta  
around  
the world

China



Paraguay



Brazil



Argentina

IC ANCE



## From Milk Recording to Dairy Herd Management Services in Brazil

**Improvement of Teaching, Research and Extension  
through the creation of a Dairy Management Service  
operated and used jointly by university, breeders and  
dairy coops in the state of Paraná, Southern Brazil**

**A ICDS/CIDA project**

**1987-1992**

Executing Agency: McGill University

Partners: PATLQ-QDHAS, UFPR, APCB, OCEPAR

Funding Agency: CIDA

# Main objectives

- Develop milk recording operations and services to producers.
- Training of programmers, field staff, lab technicians and other professionals.
- Assist to exploit milk recording as a management tool.
- Organize round tables, symposia, meetings, in Brazil.
- Purchase of main lab equipment.
- Applied research using the data bank.

Phase I  
Paraná Dairy Herd Analysis Program  
- PARLPR

A Program of APCB  
Execution : UFPR and McGill  
1987-1992

# Phase I - RESULTS.

# Paraná, 1993.



# Phase II

## Extension and Rural Development in Dairy Production in Brazil.

An ICDS/CIDA project  
1993-1997

Executing Agency: McGill University

Partners: PATLQ, UFPR, APCBRH

Funding Agency: CIDA

## Main objectives of Phase II

- Improve rural extension for dairy production.
- Improve teaching capabilities of UFPR
- Collaborative research in genetics and nutrition of cows using the newly built data bank.
- Implement a feed analysis service
- Purchase a NIRS feed analyzer



# Paraná Dairy Herd Analysis Program - PARLPR



## Quantifiable outputs from the project, 1997.

- Students trained at the M.Sc. and Ph.D level at McGill.
- Veterinarians, agrologists and field supervisors trained in Brazil.
- Nutritionists from Coops on short intensive training at McGill.
- Organization of three symposia in the state of Paraná.
- Milk analysis lab capability expanded to 60,000 samples per month.

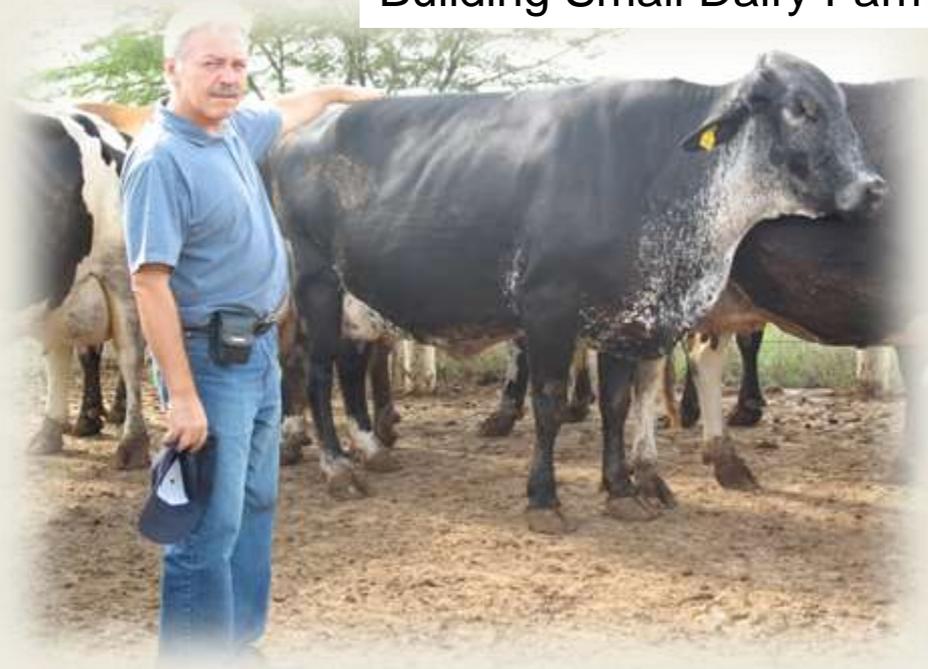
# Herds and cows on milk recording in the state of Paraná, Brazil

	Herds	Cows	
1987	236	9 276	
1991	304	13 501	Full lab operation
2006	231	19181	
2015	474	39698 <b>+150000 BT</b>	

Outreach activities. The state of Rio Grande do Sul built at its UPF (Passo Fundo) a central dairy laboratory and 50 professionals are trained as dairy nutritionists

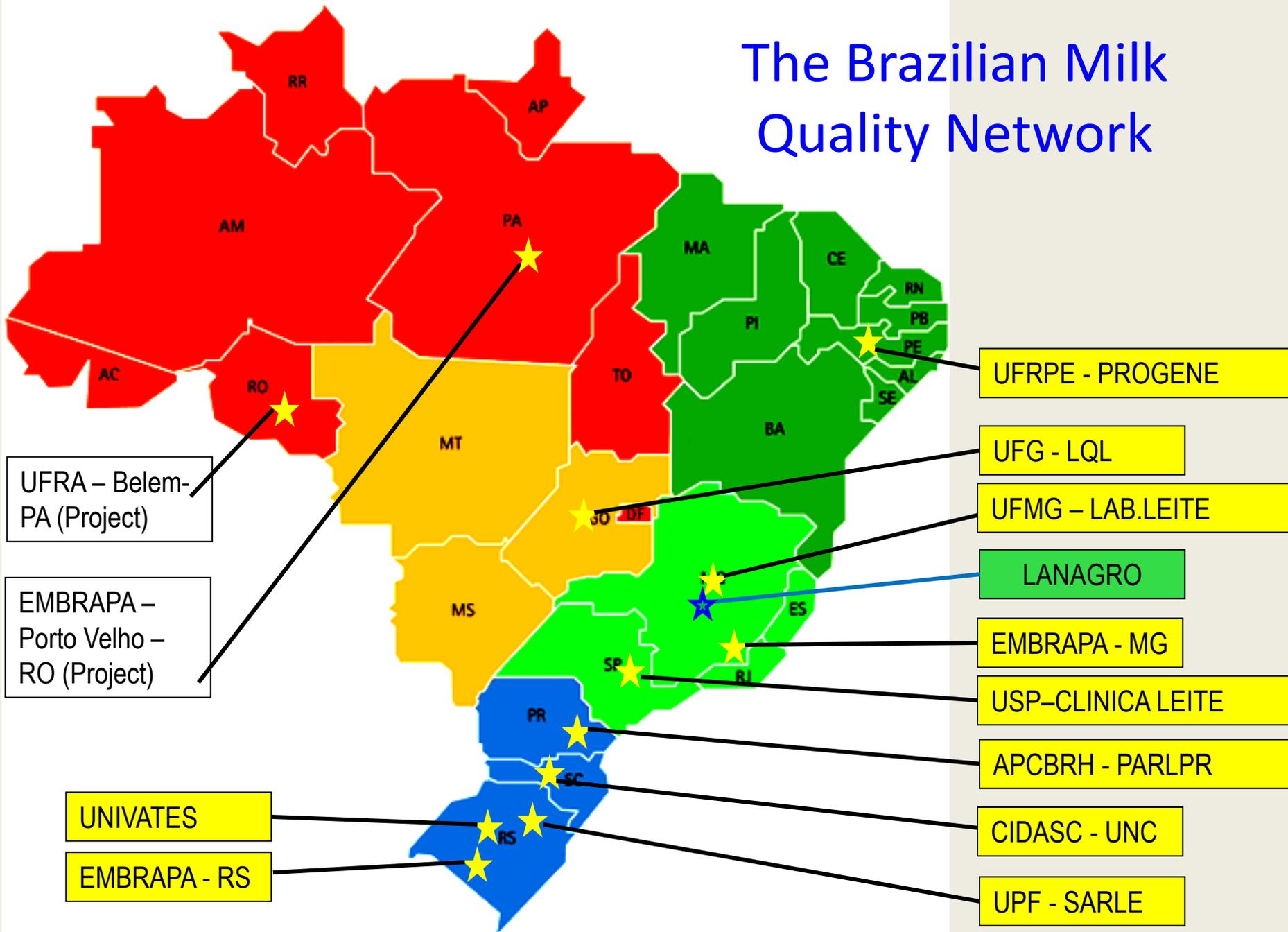


# Outreach: Knowledge Exchange for Capacity Building Small Dairy Farmers in Northeast Brazil



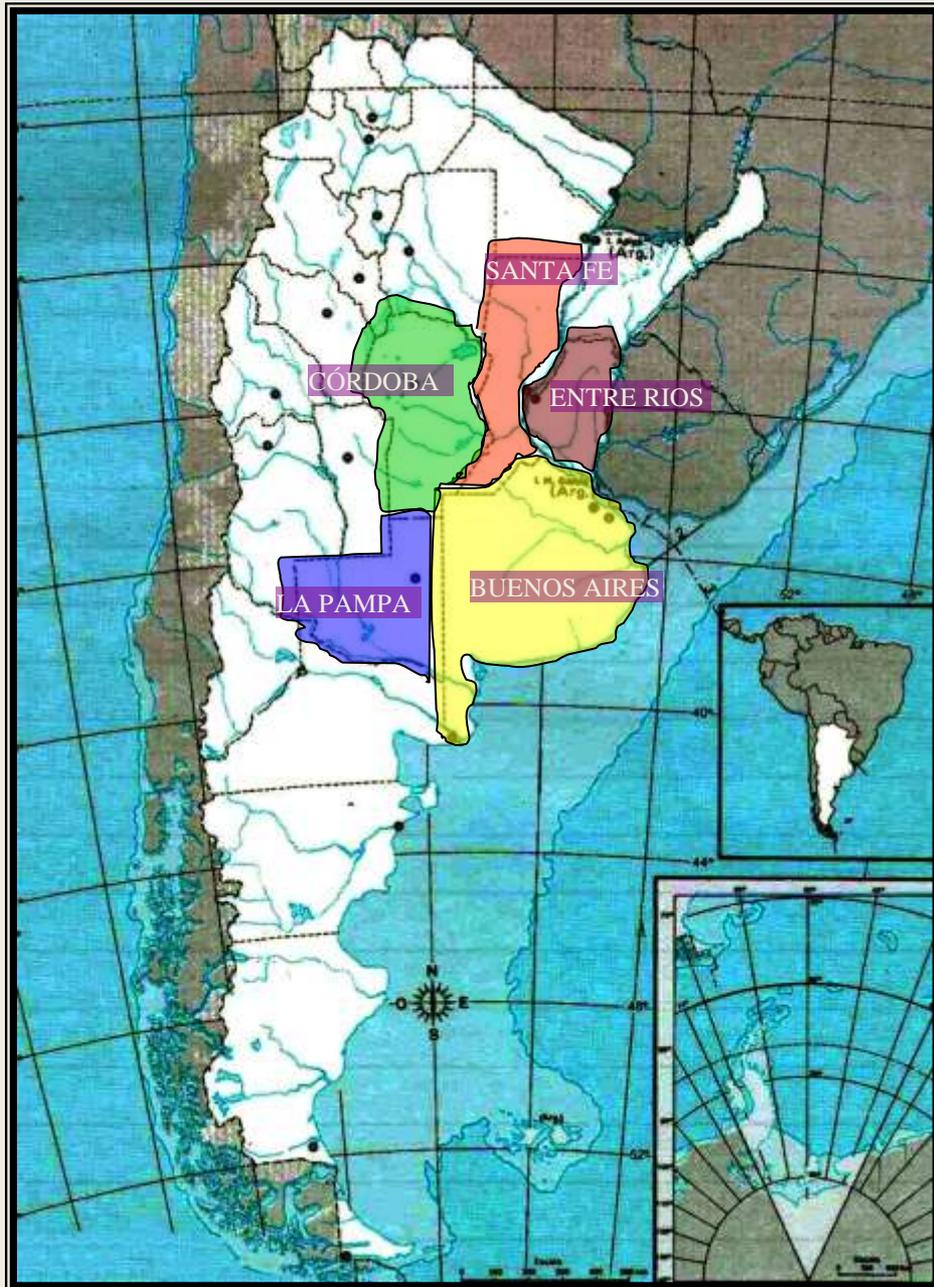


# The Brazilian Milk Quality Network



# Milk recording, Brazil, 2015

<b>Herds and cows on MR- Holsteins - 2015</b>			
<b>States prov. services</b>	<b>Herds</b>	<b>Cows</b>	<b>%</b>
Paraná 	<b>474</b>	<b>39698</b>	<b>58,7</b>
São Paulo	<b>77</b>	<b>9051</b>	<b>13,4</b>
Minas Gerais	<b>108</b>	<b>8252</b>	<b>12,2</b>
Rio Grande do Sul 	<b>106</b>	<b>3613</b>	<b>5,3</b>
Santa Catarina 	<b>89</b>	<b>3141</b>	<b>4,6</b>
Goias	<b>22</b>	<b>2093</b>	<b>3,1</b>
Espirito Santo	<b>28</b>	<b>1519</b>	<b>2,2</b>
Pernambuco 	<b>11</b>	<b>212</b>	<b>0,3</b>
<b>Total</b>	<b>915</b>	<b>67579</b>	<b>100</b>



# From Milk Recording to Dairy Herd Improvement in Argentina

# Rural Development and Technology Transfer in the Dairy Sector in the Province of Santa Fé, Argentina

A Canada-Southern Cone Technology Transfer Fund

2000-2005

Executing Agency: McGill University

Partners: QDHAS-PATLQ, ALECOL

Funding Agency: CIDA

# Goal and objectives of the Argentina Project

- Goal: To assist in the development of the dairy sector in Argentina.
- To upgrade knowledge and skills of professionals, technicians and producers.
- Use milk recording as a management tool.
- To create a centralized dairy management system providing technical services to producers.
- To facilitate the empowerment of farmers to negotiate and commercialize their milk.



**Regional Laboratory for Analytical Services (LARSA), ALECOL, Esperanza, Santa Fe, Argentina. 2004**





**Regional  
Laboratory for  
Analytical Services  
(LARSA), ALECOL,  
Esperanza, Santa  
Fe, Argentina. 2016**



	<b>ENTITIES</b>	<b>HERDS</b>	<b>COWS</b>
1992	12	503	59 536
1995	16	727	104 096
2000	19	613	107 271
2005	20	610	118 866
2010	21	696	142 021
2015	20	492	115 128

Outreach?

# Rural Development and Technology Transfer of the Dairy Sector in the Province of Entre Rios, Argentina

A Canada-Southern Cone Technology Transfer Fund  
2005

Executing Agency: McGill University  
Funding Agency: CIDA



# Obra: Laboratorio de Control de Calidad Láctea



 Empresa Constructora:  
**Ing. Pedro Torres Amarilla**

Inicio: **Abril 2014**

Con el Apoyo Financiero de:

Proyecto y Fiscalización:  
**Nuevo Concepto**

Culminación:  
**Setiembre 2014**

M<sup>2</sup> a Construir: 381.86

 **BID**







# Our commitment to the development of the Ukrainian dairy sector





Affaires étrangères, Commerce  
et Développement Canada

Foreign Affairs, Trade and  
Development Canada

# Ukraine Dairy Business Development Project (2014-2021)

Executing Agency: SOCODEVI

Consulting partner: Valacta

Funding: ACIDI-CIDA, Ukraine Local gov.



## SOCODEVI

- A network of cooperatives that share their technical expertise and knowledge with partners in developing countries such Ukraine

## PROJECT

- 2 locations: L'viv (Western UA) and Dnipropetrovsk (Eastern Ukraine)
- Three main components:
  - Development of the dairy sector – Where Valacta is mandated
  - Development of the grain sector in small communities
  - Gender project



Affaires étrangères, Commerce  
et Développement Canada

Foreign Affairs, Trade and  
Development Canada

# Ukraine Dairy Business Development Project (2014-2021) phase II

Executing Agency: SOCODEVI

Partners: UA Gov., Heifer Int., Danone, Valacta, LADS, DAAS

Funding Agency: CIDA

# Objectives (2014-2018)

SOCODEVI is using the expertise of VALACTA for the implementation of both DMS.

1. Training staff for extension services
2. Building two dairy labs in two ukrainian provinces
3. Data processing
4. Organizational structure and business model for two Dairy Management Services in Lviv and Dnipro



# EXTENSION SERVICES STAFF TRAINING PROGRAM

In a class room



In the field



In the barn



# LABORATORY COMMISSIONING



Training in Canada  
July 2015





**LVIV, October 07, 2015**



**DNIPRO, 18 mai, 2016**



# Challenges

- Family farms on MR? Coops to the rescue!
- Central laboratory services...the lab is power!
- Capacity building... where to start?
- Definitely lost in translation!
- Habits and customs (3x milkings, winter feed, safety, seasonality)
- Milk quality
- Quod scriptum est Manet...that is written, remains, even if it is garbage. Garbage in, garbage out!
- The market



# Big Challenge

The recording of animal performance is useless unless the data are subsequently used to improve production, productivity or product quality.

(FAO, Rome, 1998)



*Quod scriptum  
est manet*

**Will the market help?**



# Challenges for ICAR....

- **Members of ICAR will change. ICAR members in 2025 will may be different from the members we have now. (Wilmink, 2014)**
- **Dairy products are on greater demand and consumers want availability, accessibility, quality and environmental sustainability.**
- **It is estimated that, throughout the world, almost 150 million farm households are engaged in milk production. (IFCN, 2015)**



# Lessons learnt

- **It's a lifelong partnership**
- **Be creative... adapt and improvise!**
- **The perennity of milk recording depends on its adoption**
- **Technology is not enough,... Human beings are the true responsables for the succes or the failure.**

# Acknowledgements

(in order of appearance)

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- Maksym Maksymov
- Anne-Marie Christen
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# Thank You!



**McGill**  
UNIVERSITY

