COOPERATION IN THE FIELD OF ANIMAL BREEDING IN BALTIC COUNTRIES

H. VIINALASS

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BALTIC COUNTRIES

• Similar history
• Members of EU from 2004
• Dairy farming is the main source of income for agricultural holdings in three Baltic countries
• Smaller dairy farms in Latvia-Lithuania, larger in Estonia
  – Herd size in milk recording, 2009
    • Latvia 17.3 cows
    • Estonia 87.3 cows

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BALTIC COUNTRIES

• Milk recording, 2009
  – Lithuania – 43% of cows
  – Latvia    – 60% of cows
  – Estonia   – 92.3% of cows

• Productivity of cows in milk recording, 2009
  – Estonia   – 7447 kg
  – Lithuania – 6119 kg
  – Latvia    – 5785 kg
OUTLINE

- 15 years of Baltic Animal Breeding Conferences
- Collaborative research projects
- Cooperation between organisations and breeders
BALTIC ANIMAL BREEDING CONFERENCE

• A lot of common problems to be solved
• Share the experience
• Give floor to young scientists, PhD and MSc students
• 1995 – Tartu, Estonia

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<td>15.</td>
<td>2010</td>
<td>Riga</td>
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BALTIC ANIMAL BREEDING CONFERENCES

Baisogala, 1999

Jelgava, 2000
BALTIC ANIMAL BREEDING CONFERENCES

Kaunas, 2002

Jelgava, 2000

Tartu, 2004

Pärnu, 2007

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BABC FIELD TRIPS

Piistaoja Farm, 2007, Estonia

Tori stud, 2007, Estonia

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RESEARCH INSTITUTIONS

Estonian University of Life Sciences
Tartu

Research Institute of Biotechnology and Veterinary Medicine “Sigra”, Latvian University of Agriculture, Sigulda

Latvia Agricultural University, Jelgava

Institute of Animal Science of Lithuanian Veterinary Academy Baisogala

Lithuanian Veterinary Academy, Kaunas

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RESEARCH PROJECTS

• Origin and genetic diversity of North European sheep breeds
  – Funded by Nordic Council of Ministers, 1999-2001
• Partners
  – Agricultural Research Institute in Iceland, Iceland
  – Danish Institute of Agricultural Sciences, Denmark
  – Norwegian School of Veterinary Science, Norway
  – Swedish University of Agricultural Sciences, Sweden
  – Agricultural Research Centre, Finland
  – Latvia University of Agriculture, Latvia
  – Lithuanian Veterinary Academy, Lithuania
  – Estonian Agricultural University, Estonia

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RESEARCH PROJECTS

• Analysis and Comparison of Genetic Diversity in Cattle Breeds of the Northern European Area
  – Funded by Nordic Council of Ministers, 2000-2002
• Partners
  – Norwegian School of Veterinary Science, Norway
  – Nordic Genebank – Farm Animals, Norway
  – Agrifood Research Finland, Finland
  – National Research Institute of Animal Production, Poland
  – Latvia University of Agriculture, Latvia
  – Estonian Agricultural University, Estonia
  – Lithuanian Veterinary Academy, Lithuania
GENETIC DIVERSITY PROJECTS

- 35 cattle breeds from Denmark, Estonia, Finland, Iceland, Latvia, Lithuania, Norway, Poland and Sweden
  - 20 microsatellite markers recommended by FAO
- 33 sheep populations from Denmark, Estonia, Finland, Iceland, Latvia, Lithuania, Sweden, Norway
  - 25 microsatellite markers recommended by FAO. mtDNA

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OUTCOME

• Network building – within and between countries
• Workshops on molecular genetics
• Workshops on population genetics
• Evaluation of genetic distances and genetic diversity of breeds
• Information for making decisions on sustainable management and conservation of cattle and sheep genetic resources
• 4 PhD thesis in Baltic countries
OUTCOME

• Transfer of knowledge to researches, authorities and decision makers, farmers, students
• Dissemination of information increased public awareness about AnGR
• Initiated collaboration within each of Baltic countries between people involved in activities on AnGR – farmers, breeding associations, governmental structures, research groups

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ONGOING PROJECT - BALTFOODQUAL

Unlocking Animal Food Quality Research Potential in Baltic Region by Developing Scientific and Technical Capacities of the Research Institute "Sigra"

- FP7-REGPOT-2007-1

- **Objective**
  - to stimulate realization of research potential of the enlarged EU by unlocking and developing existing research potential in Baltics
  - strengthen capacity of researchers
  - improve technical capacity of the Research Institute "Sigra", Latvia

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ONGOING PROJECT - BALTFOODQUAL

• Partners
  – Research Institute of Biotechnology and Veterinary Medicine “Sigra” of Latvia University of Agriculture, Latvia
  – Institute of Animal Science of Lithuanian Veterinary Academy, Lithuania
  – Estonian University of Life Sciences, Estonia
  – Swedish University of Agricultural Sciences, Sweden
  – University of Aarhus, Faculty of Agricultural Sciences, Denmark

• Estonia – Methodologies in research of genetic potential in livestock breeding and pig breeding
• Lithuania – Methodologies in research of quality and quantity parameters of feed by animal species

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BREEDING COORDINATION AND SUPERVISION

Estonian Veterinary and Food Board

Latvia State Agency
Agricultural Data Centre

Lithuanian Animal Breeding and Supervision Service

Latvia Food and Veterinary Service

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ANIMAL RECORDING

Estonian Animal Recording Centre

SE „Animal Productivity Control“

Latvia State Agency Agricultural Data Centre
MILK RECORDING

Estonian Animal Recording Centre
Milk analysis laboratory

3 laboratories
Stock company "Sigulda Artifical Insemination and Stock Breeding Station" Milk Quality Control Laboratory, Sigulda

"Piensaimnieku laboratorija" Ltd. Control Laboratory, Ulbroka

Stock company "Station of Pedigree and Artificial Insemination of Latgale" Laboratory of analysis of milk, Viljani

Milk laboratory, Kaunas

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COOPERATION BETWEEN BREEDING ORGANISATIONS AND BREEDERS

- Beef cattle breeders in Baltic countries
- Regular meetings

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COOPERATION BETWEEN BREEDING ORGANISATIONS AND BREEDERS

• Informal contacts and collaboration between breeding organisations of different species and breeds

• Both breeding organisations and breeders are invited to attend at the animal shows

• Exchange of breeding material (semen, live animals – cattle, sheep, horses, pigs)
CONCLUSIONS

• Tradition of Baltic Animal Breeding Conferences
• Very good cooperation in the field of animal genetic resources
• However
  – The cooperation could be comprehensive and more active
  – New joint projects should be initiated
  – Development of common testing of beef cattle
  – Common auctions of animals could be arranged

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