Streamlining data exchange between dairy herds, milk recording organizations, farm service providers, dairy equipment manufacturers and on-farm software organizations.
The Danish perspective

- We have seen the need for exchange of data for years
- We have been searching for the most cost-efficient way to make this happen
  - National
  - Nordic
  - And now international level
- We do get a lot of request from providers of on-farm systems to exchange data
• International Dairy Data Exchange Network (iDDEN)
  – Background and rationale
• The barriers and challenges to data exchange
  – Technical
  – Regulatory
  – Organizational
• Solutions and practical lessons learned
• Farms get bigger each year
• More need to replace (expensive) labor by technical equipment
• Equipment / sensors initially developed for use in humans are adapted to animals
• Availability of new data
Worldwide Potential, current shareholders

13 countries Opportunities to expand
20 million cows 200,000 dairy herds
7 owner companies 35 herd recording organisations

- Future customers (OEM, DDO, and others) and additional shareholders will help to be one of the key players worldwide, to set a common standard for dairy cattle data and data exchange
Where are we now?

- All shareholders are connected to the iDDEN system
- 31 ICAR ADE messages implemented
- Agreements with two strategic partners and two OEMs
- Good interest from DDOs and service providers

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GEA and the International Dairy Data Exchange Network (iDDEN) have entered into partnership. This cooperation aims to optimize data exchange between DairyNet software for GEA equipment and international organizations for animal data collection and processing.
Data Exchange on line – the goal

Animal data
Kg Milk
Fat & Protein
SCC
Flowdata
Sensor data
Kg feedstuff

Milk analysis
Feed analysis
Genomic analysis

Data exchange partners

Lab
- Milk
- Feed stuff
- Genomic selection

Milking Equipment
Sensor data, activity data

Feeding registration, feed stuffs

Feed rations
Kg loaded per feedstuff
Kg unloaded peer group
NIR

Animal data
Activity
Ruminating
Movement
Standing/laying time
Health data
Barriers and challenges

• OEMs and other companies operating across different countries, languages, and data providers
• Different data definitions
• Lack of people or resources allocated to integration
Solutions and practical lessons learned

• Standardize as much as possible
  – ICAR ADE data definitions
  – Open Standards

• Critical size to influence or set standards

• High level of tech support
  – Info pack for new users
  – Biweekly coordination meetings during integration
  – Tech discussions via Slack

• Tools
  – Translation Tool to support OEMs for different markets
  – Admin Tool to monitor the day-to-day operation of your data exchange

• Professional service partner
  – Mtech (Finland), an experienced agricultural software service provider

• Sufficient size to finance the necessary infrastructure
Barriers and challenges

• Confusion about data use regulations
• Translating and understanding legal jargon
• Disconnect between technical teams, senior management, and lawyers
• Concerns about data being stored
• Concerns about data access
Solutions and practical lessons learned

• No data storage within iDDEN
  – Only temporary to deal with technical interruptions
  – Log files to help customers monitor their data exchange

• Authentication approaches
  – Farmers retain control of their data – they must authorize access

• Use of standardized, simple data use agreements

• An international approach – most OEMs are global or operate across many countries
Barriers and challenges

• Companies that:
  – Have no data management strategy
  – Are unclear on the value of data sharing
  – Want to ‘control’ data (even from other sources)

• Data exchange is seen as a “technical function” instead of a business priority

• Disconnect between technical teams and senior management (“decision makers”)

• Limited budgets allocated to data
Solutions and practical lessons learned

• Communication
• Communication
• Communication
• Communication
• Simplifying data exchange processes
• Ownership and governance by a consortium of farmer-controlled member organisations from around the world
• Advisory Committee comprising iDDEN shareholders and strategic partners
World premiere of the iDDEN data exchange 😊
• Farmers want their service organizations to help them make better use of data
• Benefits to data exchange are clear – but not all companies have seen the value (yet)
• Overcoming any technical barriers is relatively easy
• Legal barriers are overcome by only exchanging (not storing data), authentication, and standard agreements
• Organizational barriers are addressed by frequent communication, simplifying data exchange, and building trust
• It works!
THANK YOU

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