Udder health in The Netherlands:
from science to practice

EAAP Session Udder Health
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Udder health: from Science to Practice

- Introduction
- Developments in Dutch dairy sector
- Mastitis Program in The Netherlands
  - Why
  - Who
  - How
- Take home message
Experimental station Waiboerhoeve
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The Dutch dairy sector in 2007

- 21,000 Dairy farms
- 350 dairy farms with on-farm dairy processing
- Average size 64 cows, 500,000 kg/year
- 11 billion kg milk
- 15 dairy companies
- Two main dairies - 80% of all milk
- One national milk test laboratory QLIP
- Milk payment: Components, Quality and QA
Developments in NL dairy husbandry since 1960
## Milk production per cow (recorded herds)

<table>
<thead>
<tr>
<th>Year</th>
<th>Kg milk/lactation</th>
<th>% fat</th>
<th>% protein</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950</td>
<td>4,110</td>
<td>3,66</td>
<td>--</td>
</tr>
<tr>
<td>1970</td>
<td>4,639</td>
<td>3,96</td>
<td>3,33</td>
</tr>
<tr>
<td>1990</td>
<td>6,873</td>
<td>4,38</td>
<td>3,46</td>
</tr>
<tr>
<td>2000</td>
<td>8,418</td>
<td>4,37</td>
<td>3,48</td>
</tr>
<tr>
<td>2007</td>
<td>9,278</td>
<td>4,38</td>
<td>3,50</td>
</tr>
</tbody>
</table>
Developments in the past decades (1950-2008)
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Mastitis Program in The Netherlands

- Mastitis is economic disease nr.1
- Milk quality
- Animal welfare
- Food safety
- Consumer concern
- Increase in cell counts from 2000-2004

Reason for Dutch Dairy Industry and Farmers organization to start national Mastitis Project
Development BMSCC in The Netherlands
National project on Mastitis 2005

- Dutch Udder Health Centre (UGCN)
- Objective: Reduction of clinical mastitis cases from 30 cases to 20 cases per 100 cows
- National knowledge centre udder health
- 5 year program, two main work topics, 9M€
  - Research
  - Implementation of knowledge
- Collaboration with all parties

www.ugcn.nl
Questionnaire 2005

400 random dairy herds:
Questionnaire knowledge, attitude, behaviour

- Producers don’t want complicated management
- Mastitis is no ‘coincidence’ but is hard to handle
- Management is mainly improved when farmers feel they have a problem
- Dairy magazines and practitioner are the most important source of information
- Private practitioner is first contact person in case of udder health problems
Integration research and implementation

Creating knowledge is not enough…. It has to be applied

- Information should be:
  - Available, easy reachable
  - Attractive
  - Profitable
  - ‘Believed’
  - Tailor made for end user, not all farmers are “the same”
Dutch Udder Health Centre

Steering Committee

Dairy industry & farmers

Research Committee
Private Practitioners
Farmers Advisory Council
Research

- Cooperation with institutes/universities/practitioners
  - 7 PhD students
  - Appr 25 researchers (partly)
  - Appr. 200 practices

- Cooperation
  - Research Committee UGCN (coordination research)
  - Dutch Mastitis Research Workers
  - Canadian Bovine Mastitis Research Network
Research Committee

- Applied research, new, focus on farmers profit
- Identification of white spots
- Review research projects, advice for Steering Committee
- Three main themes
  - Bacteria (infectious pressure, diagnostics etc.)
  - Cow (resistance of the cow)
  - Farmer (factors influencing the farmers)
Research themes and projects

- **Bacteria**
  - 6 projects (CNS, PCR, Biofilm, Mycoplasma a.o.)

- **Cow**
  - 9 projects (resistance, vitamin E, BVD, milking, breeding, risk factors)

- **Farmer**
  - 7 projects (farmers motivation, financial stimuli, costs and profits, communication, intervention study, success rate preventive measures)
Research topics COW on milking & breeding

- **Automatic cluster removers**
  - Correct setting important – device to check
  - Increase threshold value to 400 gr/min
- **Machine on time test**
  - High, medium and low cell count groups
  - Method valuable to check milking installation / method
- **Mastitis management on robotic farms**
  - Ongoing research
  - Risk factors, management practices
- **Cell count breeding values**
  - Paper De Haas et al.
Project Automatic cluster removers tool

- Cluster removal end of milking
  - Overmilking, milking parlour capacity
- NL: Widespread use of ACR >70%
- Threshold value often not known
- Correct settings important
- Field tests, often low threshold value
- Combination with electronic milk meters
- Development of a tool / device to check in field
Automatic cluster removers
Figuur 23 Voorbeeld van een aangeboden flow karakteristiek en afname respons van verschillende melk standen met een uit vergroting van het gebied waarin wordt afgenomen.
Results: ACR tool

- Tool available
- Implementation in national maintenance system
- Will be used by technicians
- Advices to farmers:
  - Electronic milk meters – separate indicator
  - Threshold value from 200 to 400 cc/min
Machine on time test as preventive tool

- 3 cohorts (Low, Medium, High BMSCC)
  - Low: BMSCC < 150
  - Medium: >150 < 300
  - High: >300
- Objective: to identify added value machine-on-time test as preventive measure
- Check, analysis and advice to farmer
- Ongoing research (dec 2007-dec 2008)
- Preliminary data on clinical mastitis as reported by farmer at 0, 6 & 12 months
Risk factors AMS management

- Strong development robotic milking
- Analysis farm, robot, management strategy
- Ongoing research on 150 farms
- Risk factors related with
  - Machine and barn layout
  - Cow (milking frequency, intervals, infections)
  - Farmer (cow and feeding management, hygiene)
- Transform to preventive measures
Implementation of knowledge

- Role of private practitioner important source for farmers
- UGCN 5 point plan for Mastitis
- Study groups with farmers and practitioner
- Exchange of knowledge within study groups
- Farmers learning from each other
- Internet, seminars, publicity campaigns
- Milker Awards
UGCN 5 point mastitis plan

- Infectious pressure
- Planning and goal setting
- Treatment
- Resistance
- Milking and milking-machine
It Pays To Reduce Mastitis!

- Infectious pressure
- Milking (machine)
- Planning and control
- Resistance
- Treatment
Study groups as a tool

![Graph showing bulk milk SCC over time for different groups: Intervention Study, Intervention Other, and Control.](image-url)
Practitioners

- Practitioners have a big influence on their clients
- Significant practice-effect
- Instruments are available to improve udder health
- Many farmers are not reached

2007
183 veterinary practices
430 practitioners
16416 farmers
2999 participants
Several campaigns directed to farmers

- Udder Health Awards
- Milking gloves
  - 25% is using gloves, now up to 40%
- Liner replacement
  - 2/3 of replacement too late
- Milking protocol
  - Procedures milking, milk separation
  - White-board
Udder Health Awards
Home

Laat u niet verleiden tot het kopen van goedkoop zaagsel!

Door het warme en vochtige weer is klei-slibbige de laatste weken meer een actueel probleem. Het is daarom zeer onverstandig om ondanks de hoge prijs, eerst kwalitatief zaagsel te kopen. Klei-slibbige kan een ernstige vorm van maskills en zelfs dode koeien veroorzaken, waardoor de schade al snel hoger is dan de besparing op zaagsel. Denk daarbij ook aan het mogelijke subliminale (hoog belasting) karakter van klei-slibbige.

UGCN zoekt deelnemers voor het UGCN Netwerk

Het UGCN zoekt melkveehouders voor het nieuw op te richten UGCN Netwerk. Deze melkveehouders spelen een belangrijke rol in de verdere invulling en verspreiding van het Melkveehouderplan Uiergezondheid.

Geïnteresseerd?
We zoeken ongeveer 5 veenhouders per provincie. [Lees hier meer]

Praktisch hulpmiddelen

Het UGCN beschikt over een heleboel praktische hulpmiddelen en bas voor veehouders om de uiergezondheid van hun koeien te helpen verbeteren. Zo zijn er het Bedrijfsboekje, de veekensheet en de koeiendisco-flessen. Doe er wat mee.

Overzicht van alle Praktisch hulpmiddelen >>

Actueel

15-08-2008 Laat u niet verleiden tot het kopen van goedkoop zaagsel
14-08-2008 Piet Dolman voert plantenvezel bij hittestress: “Goede voeropname en meer melk”
13-08-2008 UGCN partner Paul van der Leen, CA Hill: “Hygiëne kan bellet”
10-08-2008 Boerenonderzoek
04-08-2008 Versleten teelplooiing oorzaak van uiergezondheidsproblemen

Agenda

10-09-2008 UGCN Netwerkbijeenkomst (Noord)
11-09-2008 Inhoudsomslag Nieuwsblad bijeenkomst.
24-09-2008 Boekmanagement (voor praktici)
26-09-2008 UGCN netwerkbijeenkomst (Zuid)

Aanmelden e-mail nieuwsbrief

- Nieuwsbrief augustus 2008
- Klik hier om u aan te melden voor de e-mail nieuwsbrief van UGCN
Implementation of research results

- Communication is crucial
- Top-down doesn’t work
- Motivating factors
- Economic aspects
- Approach through private practitioners
- How to reach farmers not motivated to improve udder health?
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Take Home Message

- Mastitis one of most important diseases
- Role of farmer, practitioner and advisors
  - Co-operation
  - New ways to transfer science to practice
  - Communication !!
- Paying attention to mastitis is worth the money
  - For the farmer
  - For the cow
  - For the consumer
Acknowledgement

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