ICPD 2019
June 27 - 29
17th International Conference on Production Diseases in Farm Animals
Bern
Switzerland

Programme
**Information**

Conference venue:

von-Roll-areal of the University of Bern
Fabrikstrasse 6
CH-3012 Bern

The official language at the conference will be English.

**Notice to Attendees:**

Use of cameras, video cameras and cell phones (for calls or as cameras) is prohibited during oral and poster presentations to minimize disruption and unauthorized dissemination of data.

**Building no. 8:**

Foyer
- Lunch breaks
- Gala dinner including Apéro

**Building no. 6:**

Foyer, lecture rooms 001, 002, 003, 004
- Registration
- Poster exhibition
- Industry exhibition
- Coffee breaks
- Oral presentations
- Graduate student workshop

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**Sponsors**

The 17th International Conference on Production Diseases in Farm Animals is held at the University of Bern, Switzerland, from June 27-29 in partnership with the Swiss Federal Food Safety and Veterinary Office.

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### Oral presentations

**Thursday, 27th June 2019**

| Time   | Session 01 (continued): Use of Antimicrobials: Security and safety aspects for producers and consumers  
Chair: H. Nathues (CH) / T. Lam (NL) | Session 02: Locomotion disorders: Impact on performance and welfare  
Chair: A. Steiner (CH) / C. Mülling (DE) |
|--------|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| 09:00  | Opening and welcome  
D. Spreng, Dean of the Vetsuisse Faculty  
R. Bruckmaier & J. Gross, Chairs ICPD 2019                                                         | Prudent and effective antimicrobial use in a diverse livestock and consumer’s world  
U. Magnusson (SE)                                                                          |
| 09:15  | Invited                                                                                         | Actual resistance situation among bacterial pathogens of food-producing animals  
S. Schwarz (DE)                                                                            |
| 10:45  | Coffee break & posters (sessions 01, 02)                                                        |                                                                                                                                 |
| 11:30  | Invited                                                                                         | Antimicrobial use and antimicrobial resistance in dairy cattle  
T. Lam (NL)                                                                               |
| 12:15  | Invited                                                                                         | The future-proof bovine practitioner understands that improved mastitis management is key to prudent use of antimicrobials on dairy farms  
S. DeVliegher (BE)                                                                        |
| 13:00  | Lunch                                                                                           |                                                                                                                                 |
| 14:00  | Lunch                                                                                           |                                                                                                                                 |

### Oral presentations

**Thursday, 27th June 2019**

| Time   | Session 03: Production diseases and welfare in laying hens  
Chair: M. Toscano (CH) / D. Karcher (US) | Session 04: Gut microbiome and animal health  
Chair: A. Geiger (US) / J. Gross (CH) |
|--------|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| 11:30  | Invited                                                                                         | The causes of keel bone fractures in laying hens  
M. Toscano (CH)                                                                          |
| 12:15  | Invited                                                                                         | Environmental factors contributing to keel bone damage sustained by laying hens  
M. Makagon (US)                                                                          |
| 13:00  | Lunch                                                                                           | Infectious bursal disease virus infection leads to modifications of gut-associated immune parameters and microbiota composition  
S. Rautenschlein (DE)                                                                     |
| Time    | Session 01 (continued): Use of Antimicrobials: Security and safety aspects for producers and consumers  
Chairs: H. Nathues (CH) / T. Lam (NL) | Room 002 | Session 02 (continued): Locomotion disorders: Impact on performance and welfare  
Chairs: A. Steiner (CH) / C. Mülling (DE) | Room 003 | Session 03 (continued): Production diseases and welfare in laying hens  
Chairs: M. Toscano (CH) / D. Karcher (US) | Room 004 | Session 04 (continued): Gut microbiome and animal health  
Chairs: A. Geiger (US) / J. Gross (CH) |
|---------|-----------------------------------------------|----------|-----------------------------------------------|----------|-----------------------------------------------|----------|-----------------------------------------------|
| 14:15   | Effects of antibiotics on sessile bacteria in drinking water systems in poultry farms: A model approach  
R. Mateus-Vargas et al. (DE) | 14:15 invited Lameness in dairy cows; where have we been and where are we going?  
L. Randall (GB) | 14:15 invited Quality of the laying hen skeleton; insights and solutions from genetics  
I. Dunn (GB) | 14:15 invited Supporting Gut Health: Principles Underlying Alternatives to Antibiotics in Food Animal Management  
T. Elsasser (US) | 14:15   | 14:15 invited |
| 14:30   | Effects of a bacterial biofilm on various antibiotics  
F. Hahne et al. (DE) | 14:45 invited Digital Dermatitis Update – What should artificial intelligence do for you in the near future?  
D. Doepfer (US) | 15:00 invited Identifying genetic components contributing to bone strength in laying hens  
D.‐J. De Koning (SE) | 15:00 invited How to select gut microbiota members with increasing chicken resistance to enteric diseases  
I. Rychlik (CZ) | 15:15   | 15:15 invited |
| 14:45   | Evaluation of antibiotic sensitivity of bacteria isolated from mastitis cases in dairy cows in the 4-year period  
K. Wodz et al. (PL) | 15:00 invited Does the feeding of discard milk to dairy calves lead to antimicrobial resistance on farm?  
C. Firth et al. (AT) | 15:00 invited Comparing bone stability of laying hens differing in phylogeny and performance level in two husbandry systems  
S. Jansen et al. (DE) | 15:45 invited Competitive exclusion and compartmentalization to intervene in colonization and transmission of ESBL-E. coli in broiler flocks  
M. Dame‐Korevaar et al. (NL) | 15:15   | 15:15 invited |
| 15:00   | Antibiotic use and resistance in E. coli from poultry – a global overview  
N. Roth et al. (AT) | 15:00 invited Permanent long-term surveillance of ammonia in livestock – possibilities of a novel sensor technology  
S. Denner (DE) | 16:00 invited Effect of egg production on bone quality in laying hens  
S. Petow et al. (DE) | 16:00 invited Impact of a mixture of mono-, di- and triglycerides of butyric, capric, and caprylic acid, formic acid and a probiotic Clostridium butyricum (CBM588) on performance and gut health in broiler chickens  
J. Zentek et al. (DE) | 15:30   | 15:30 invited |
| 15:45   | Hoof care and lameness: Learning from commercial dairy goat farms  
G. Zobel (NZ) | 16:00 invited Improvement intra- and inter-observer repeatability and accuracy of keel bone assessment in laying hens by training with radiographs  
S. Gebhardt-Henrich et al. (CH) | 16:00 invited Black food for fowl – Effects of enriched charcoal in a temporary crude protein reduced diet on male Turkeys fattened under on-farm conditions  
K. Hinz et al. (DE) | 16:30 invited Effect of dietary phytase and lactic acid treatment of cereals on metabolic active bacteria in ileal digesta, mucosa and ileo-cecal lymph nodes and expression of innate immune genes in pigs  
J. Klimsoda et al. (AT) | 16:45   | 16:45 invited |
| 16:15   | Evaluation of intra- and interrater agreement and reliability of visual locomotion scoring during the daily routine of dairy cows  
A. Hund and M. Dolezal (AT) | 16:15 invited Improving intra- and inter-observer repeatability and accuracy of keel bone assessment in laying hens by training with radiographs  
S. Gebhardt-Henrich et al. (CH) | 16:15 invited Changes in rumen pH, volatile fatty acids, lipopolysaccharide, and the bacterial community of Japanese Black beef cattle at different fattening stages  
S. Sato et al. (JP) | 16:45 invited Coffee break & posters (sessions 03, 04, 05) | 16:45 invited Coffee break & posters (sessions 03, 04, 05) |
<table>
<thead>
<tr>
<th>Room 001</th>
<th>Room 002</th>
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<tbody>
<tr>
<td><strong>Session 01: Use of Antimicrobials: Security and safety aspects for producers and consumers</strong>&lt;br&gt;Antimicrobial Resistance in Commensal Escherichia coli from fecal samples on Bavarian Dairy Farms&lt;br&gt;I. Lorenz (DE)&lt;br&gt;Associations between antimicrobial treatment modalities and antimicrobial susceptibility in <em>Pasteurellaceae</em> and <em>E. coli</em> isolated from veal calves under field conditions&lt;br&gt;L. Schönecker et al. (CH)&lt;br&gt;Effects of garlic (<em>Allium sativum</em> L.) in postweaning pigs – a placebo controlled study&lt;br&gt;H. Ayre et al. (CH)&lt;br&gt;The respiratory tract microflora sensitivity to antimicrobial drugs in newborn calves with different levels of vitality&lt;br&gt;A. Chernitsky et al. (RU)&lt;br&gt;Antimicrobial use indicators and their effect on relative ranking of grower-finisher herds&lt;br&gt;A. Bosman et al. (CA)</td>
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<tr>
<td><strong>Session 02: Locomotion disorders: Impact on performance and welfare</strong>&lt;br&gt;Detection of digital dermatitis treponemes and <em>Dichelobacter nodosus</em> from Mortellaro lesions in Swiss cattle&lt;br&gt;M. Alsaad et al. (CH)&lt;br&gt;Supporting German dairy farmers: Development of an e-learning tool to improve hoof health in dairy cows&lt;br&gt;M. Au et al. (DE)&lt;br&gt;Risk factors for pododermatitis (PD) in group housed does&lt;br&gt;M. Braconnier et al. (CH)&lt;br&gt;Impact of farm individual action plans on lameness prevalence, productivity and welfare of dairy cattle&lt;br&gt;F. Ebert et al. (DE)&lt;br&gt;Validation of a visual scoring system for footpad dermatitis in broiler chickens on farm level&lt;br&gt;S. Heitmann et al. (DE)</td>
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<tr>
<td><strong>Session 03: Production diseases and welfare in laying hens</strong>&lt;br&gt;Feather pecking in laying hens in relation to motor impulsivity&lt;br&gt;J. Heinisius et al. (DE)&lt;br&gt;Identifying welfare issues in turkey hen and tom flocks applying the transect walk method&lt;br&gt;J. Marchewka et al. (NO/PL)&lt;br&gt;Decision making of high and low feather pecking line of laying hens under ambiguity&lt;br&gt;K. Pichova et al. (SK)&lt;br&gt;The influence of tactile stimulation on affective states in laying hens&lt;br&gt;Z. Skalid et al. (SK)&lt;br&gt;Efficacy of Ammonisation to Eliminate Aflatoxin, Ochratoxin, and Zearalenone&lt;br&gt;V. Dogan and A. Hayirli (TR)</td>
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<tr>
<td><strong>Session 04: Gut microbiome and animal health</strong>&lt;br&gt;Comparison of pH, volatile fatty acids, lipopolysaccharide, and the bacterial community in the rumen and reticulum of Japanese Black beef cattle&lt;br&gt;S. Sato et al. (JP)</td>
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<tr>
<td><strong>Session 05: Impact of climate change and microclimate on animal health</strong>&lt;br&gt;Physiological indicators of beginning heat stress in grazing Holstein dairy cows&lt;br&gt;A. Pontigga et al. (CH)</td>
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<tr>
<td>Time</td>
<td>Session Subject</td>
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<tr>
<td>07:30</td>
<td>Registration open</td>
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<tr>
<td>08:30</td>
<td><strong>invited</strong> Precision Livestock Farming, a game changer for the livestock sector</td>
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<td>D. Berckmans (BE)</td>
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<tr>
<td>09:15</td>
<td><strong>invited</strong> Animal Health Surveillance and Smart Farming: Cyber Security in times with Robots, Big Data, AI and Social Media</td>
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<td>A. Dörg (CH)</td>
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<tr>
<td>10:00</td>
<td><strong>invited</strong> Coffee break &amp; posters (sessions 06, 07)</td>
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<tr>
<td>10:45</td>
<td><strong>invited</strong> Precision Dairy Opportunities and Challenges</td>
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<td>J. Bewley (US)</td>
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<td>11:30</td>
<td><strong>invited</strong> Intensive pig production systems: good or bad for animal health and welfare?</td>
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<td>D. Moes (BE)</td>
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<tr>
<td>12:15</td>
<td><strong>invited</strong> Acoustic of dairy cows’ gait: Detecting claw lesions by analyzing the footfall sound</td>
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<td>N. Volkmann et al. (DE)</td>
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<tr>
<td>12:30</td>
<td><strong>invited</strong> Monitoring calves at risk for diarrhea by use of an ear-attached accelerometer system</td>
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<td>M. Goharshahi et al. (AT)</td>
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<tr>
<td>12:45</td>
<td><strong>invited</strong> ZeliDIX – A new approach to predict udder health by using DH results and cell differentiation</td>
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<td>A. Bartel et al. (DE)</td>
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<tr>
<td>13:00</td>
<td><strong>invited</strong> Lunch</td>
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<tr>
<td>Time</td>
<td>Session 01</td>
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<tr>
<td>14:15</td>
<td>Use of cognitive bias as a welfare tool in poultry L. Koštál (SK)</td>
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<tr>
<td>15:00</td>
<td>Automated assessment of welfare in chickens M. Dawkins (US)</td>
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<td></td>
<td><strong>Session 06 (continued):</strong> Precision livestock farming methods to control animal health and welfare Chairs: S. DeVliegher (BE) / T. DeVries (CA)**</td>
</tr>
<tr>
<td>15:45</td>
<td>Effects of the novel concept “outdoor veal calf” on antimicrobial use, calf growth and mortality in Switzerland J. Becker et al. (CH)</td>
</tr>
<tr>
<td>16:00</td>
<td>Customising dry period management: consequences for milk yield, body condition and disease incidence A. van Kneissel et al. (NL)</td>
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<tr>
<td>16:30</td>
<td>Coffee break &amp; posters (sessions 08, 09, 10)</td>
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**Friday, 28th June 2019**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session 03</th>
<th>Session 04</th>
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<tbody>
<tr>
<td>14:15</td>
<td>Breeding for resilience: New opportunities in Modern Pig Breeding Programs B. Harlizius (NL)</td>
<td>Update on Postpartum Dysgalactia Syndrome in Sows N. Kemper (DE)</td>
</tr>
<tr>
<td>15:00</td>
<td>From lab to farmyard: genome editing our livestock C. Tait-Burkard (GB)</td>
<td>Relationships Between Colostrum Consumption and Kid IgG Status E. St. Clair et al. (US)</td>
</tr>
<tr>
<td>15:30</td>
<td>Assessment of two different treatment procedures after calving to improve harvesting of high quality and qualitycolostrum F. Sutter et al. (DE)</td>
<td>Evaluation of two different treatment procedures after calving to improve harvesting of high quality and qualitycolostrum F. Sutter et al. (DE)</td>
</tr>
<tr>
<td>15:45</td>
<td>Different genetic reactions of Simmental and Holstein dairy cattle concerning udder health along a continuous climate scale B. Bopst et al. (CH)</td>
<td>Assessing the utility of leukocyte differential cell counts for predicting mortality risk in neonatal Holstein calves upon arrival and 72 hours post-arrival at calf rearing facilities T. von Koningslow et al. (CA)</td>
</tr>
<tr>
<td>16:00</td>
<td>Exploiting massive genomic data to improve fertility and rearing success in Swiss dairy cattle I. Häfliger et al. (CH)</td>
<td>Use of Saccharomyces cerevisiae fermentation products in comparison to halofuginone in Cryptosporidium infected newborn calves J. Vélez et al. (DE)</td>
</tr>
<tr>
<td>16:15</td>
<td>Hypernatremia in diarrhoeic calves fed electrolytes mixed with milk replacer without access to water J. Wilms et al. (NL)</td>
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</tr>
</tbody>
</table>
### Session 06: Precision livestock farming methods to control animal health and welfare

**Association of rumination time with some biomarkers from automatic milking system**  
D. Malošauskienė et al. (LT)

**Association between social preference and development of tail biting in growing-finishing pigs**  
Y. Li et al. (US)

**Stakeholder groups’ perceptions of the primary causes of poor dairy cow welfare and dairy cow culling**  
J. Mee et al. (IE)

**Problems and solutions associated with testing a novel tail-affixed calving biosensor in dairy cows**  
J. Mee et al. (IE)

**Tail-biting in pigs: change in feeding behaviours during a tail-biting outbreak**  
C. Ollagnier (CH)

### Session 07: Metabolic status and risk of disease

**Effect of over-conditioning around calving on the mRNA abundance of genes related to the mitochondrial protein import machinery in the liver of dairy cows**  
M. Ghaffari et al. (DE)

**Effect of over-conditioning around calving on carnitine palmitoyltransferase gene expression in the liver and skeletal muscle of dairy cows**  
M. Ghaffari et al. (DE)

**Impact of essential fatty acids and conjugated linoleic acid on acute phase response and antioxidative status of transition dairy cows fed an n-3 fatty acid reduced diet**  
M. Gnott et al. (DE)

**Dynamics of metabolic oxidation in late-pregnant and early lactating dairy cows supplemented with conjugated linoleic acid or a-linolenic acid using measurements obtained in respiration chambers**  
L. Vogel et al. (DE)

**Risk factors for dairy cow herds to be classified as “ketotic”**  
M. Sabatowicz et al. (PL)

**The role of altered immune function during the dry period of dairy cows in promoting the development of ketosis in early lactation**  
M. Mezzetti et al. (IT)

**Testing dry cows for risk of postpartum diseases: two-year results from a routine laboratory**  
S. van der Drift and S. Corp-van Dijken (NL)

**Feed restriction in late gestation and early lactation affects body weight and colostrum and milk production in Iranian fat-tailed ewes**  
M. Zarrin et al. (IR)

**Regulation of the endocannabinoid system in the hypothalamus of late and early lactating dairy cows**  
B. Kuhla and A. Kuhla (DE)

**Evaluation and reduction of influence of stress in fresh dairy cows**  
G. Loštý et al. (LT)

**Intensive feeding alters sphingolipid metabolism in Holstein bulls**  
A. Kenéz et al. (HK)
### Session 07: Metabolic status and risk of disease (continued)

Effects of physiological stress during pregnancy on adaptation processes in imported cows during postpartum and dry periods  
I. Ventsisla et al. (RU)

Effects of an intramammary LPS challenge on inflammatory and metabolic responses in early lactating cows supplemented with conjugated linoleic acid  
J. Gross et al. (CH)

Recovery of milk somatic cell count and performance after an intramammary LPS challenge is dependent on the metabolic status of dairy cows  
J. Gross et al. (CH)

Prevalence of subclinical ketosis and production diseases during early lactation in dairy cows in Central and South America, Africa, Asia, Australia, New Zealand and Eastern Europe  
N. Brunner et al. (DE)

Is there an association between methane emission and lymphocyte response in peripartal cows?  
S. Meese et al. (CH/DE)

### Session 08: Impact of animal genetics on animal health and disease

Chromosomal imbalance in a boar causing cleft palate in the offspring and affecting the litter size in sows  
A. Grafofer et al. (CH)

Entropion in Swiss White Alpine sheep is associated with the CTNND1 gene region on chromosome 15  
N. Hiter et al. (CH)

Heritability and phenotypic correlations of protein efficiency in a Swiss Large White pig population  
C. Kasper et al. (CH)

The APOB loss-of-function mutation of Holstein dairy cattle reduces the capacities for cholesterol transport in circulation but does not imply a cholesterol deficiency  
J. Gross et al. (CH)

### Session 09: Neonate health: impact of feeding management and colostrum (continued)

Immune modulating effect of a seaweed extract on specific IgG and total IgA titers in the colostrum and milk  
F. Bussy et al. (FR)

Effect of the maternal supply with essential fatty acids and conjugated linoleic acid on the immune and oxidative status in neonatal calves  
K. Hiken et al. (DE)

Effect of different dietary selenium concentrations in dry cows on first colostrum IgG levels  
J. Iliek et al. (CZ)

The impact of warming of newborn Holstein calves on colostrum intake, blood parameters and vitality  
L. Jürgensen et al. (CH)

Concentrations and reference intervals of trace elements, vitamin E, and other clinical-chemical parameters in serum of 1 to 6 day old calves  
J. Muskens et al. (NL)

Can Bovine Colostrum Microbiome be linked to Passive Transfer of Immunity?  
I. van Hese et al. (BE)

Use of Brix Refractometer in Assessing Goat Colostrum  
E. St. Clair et al. (US/DE)

Determination of the nutritional boundaries for lactose replacement with dextrin in replacers for rearing calves fed twice daily  
J. Wilms et al. (NL)

Variation of colostrum composition and IgG content in goat and sheep breeds  
E. Kessler et al. (CH)

Assessment of colostrum quality in dairy cows by color measurement, Brix refractometry, and specific gravity  
J. Gross et al. (CH)

### Session 10: Novel strategies in health and disease management

Management practices associated with lamb mortality on Irish sheep farms: a national survey  
D. Shiels et al. (IE)

Demography and potential biosecurity threats associated with contract dairy heifer rearing  
M. McCarthy et al. (IE)

The effect of peer group education on veterinary prescription practices  
V.-B. Pucken et al. (CH)

Biosecurity on Finnish swine and cattle farms, with special emphasis on rodent control  
L. Seppä-Lassila et al. (FI)

Labour process during machine milking of ewes with regards to their biological needs and welfare  
L. Maluhoňová et al. (SK)

Locomotion, metabolic and alimentary disorders in Holstein and Czech Fleckvieh dairy cows – comparison of occurrence in the Czech Republic  
S. Sládková et al. (CZ)

Risk factor analysis for dairy cow production diseases by a system analysis - First results from the EIP-project "Die Entwicklung des KUH-mehr-WERT Navigators"  
M. Schären et al. (DE)

Metabolic and biochemical changes in and around parturition in relation to farrowing progress, piglet vitality and housing condition  
S. Blim et al. (DE)

Effects on milk quality when replacing soybean meal with Spirulina in a hay-based diet for dairy cows  
E. Manzocchi et al. (CH)

Microbiological quality of raw sheep's bulk milk samples on selected Slovak farms  
M. Vršková et al. (SK)
### Saturday, 29th June 2019

#### Oral presentations

<table>
<thead>
<tr>
<th>Time</th>
<th>Session 11: Behavioral signs of impaired animal health and welfare</th>
<th>Session 12: Disease aspects in reproduction</th>
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<tbody>
<tr>
<td>08:00</td>
<td>Registration open</td>
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<td></td>
<td><strong>Room 001</strong></td>
<td><strong>Room 002</strong></td>
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<tr>
<td>09:00</td>
<td>Rethinking intensive animal agriculture and meeting public expectations for our future farms</td>
<td>Management of parturition in the hyper prolific sow</td>
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<td>M. von Keyserling (CA)</td>
<td>O. Peltoniemi (FI)</td>
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<tr>
<td>09:45</td>
<td>Refining the utility of precision behavior monitoring of dairy cattle</td>
<td>Diagnosis of endometritis and cystitis: use of biomarkers</td>
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<td>T. DeVries (CA)</td>
<td>A. Grahofer (CH)</td>
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<tr>
<td>10:30</td>
<td>Coffee break &amp; posters (sessions 12, 13, 14, 15)</td>
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<tr>
<td>11:15</td>
<td>Potential underlying factors of subacute rumen acidosis: Effects of frequency and duration of feed availability on performance and milk fatty acid profile in dairy cows</td>
<td>Metabolism and host-pathogen interactions shape the development of uterine disease in dairy cows</td>
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<td>S. Abd Rahim et al. (NL)</td>
<td>I. Sheldon (GB)</td>
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<tr>
<td>11:30</td>
<td>Strong differences between early lactating primiparous and multiparous cows in feed sorting behavior, chewing activity, and rumen acidosis index</td>
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<td>A. Stauder et al. (AT)</td>
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<tr>
<td>11:45</td>
<td>Feeding time, body condition and lameness during the dry period: associations with transition period disease in dairy cows</td>
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<td>R. Daros et al. (CA)</td>
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<td>12:00</td>
<td>Analysis of behavioral changes for early detection of lameness in dairy cows</td>
<td>Repeat breeding: The cause and the possible treatment to restore fertility</td>
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<td>J.-B. Burla et al. (CH)</td>
<td>S. Katagiri (JP)</td>
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<td>12:15</td>
<td>Effects of social deprivation in pigs on their behavioural, neuroendocrine and immunological responses to acute endotoxemia</td>
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<td></td>
<td>R. Brückmann et al. (DE)</td>
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<tr>
<td>12:45</td>
<td>Lunch</td>
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<tr>
<td>Time</td>
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| 14:00 | **Session 15:** Persistent health effects of juvenile development  
Chairs: S. Agenas (SE) / E. Trevisi (IT) | **Session 12 (continued):** Disease aspects in reproduction  
Chairs: H. Ballwein (CH) / A. Miyamoto (JP) | **Session 13 (continued):** Mineral homeostasis and associated diseases  
Chairs: L. Hernandez (US) / R. Bruckmaier (CH) | **Session 14 (continued):** Infectious diseases and pathobiology  
Chairs: O. Weltnitz (CH) / S. Kohler (CH) |
| 14:00 | Invited | Invited | Invited | Invited |
| 14:00 | Nutrition in early life imprints metabolic health  
K. Huber (DE) | Factors affecting reproductive wastage in beef cattle herds  
D. Kenny (IE) | Skeleton health: Nutritional and management interventions  
D. Karcher (US) | Impact of the poultry red mite (Dermanyssus gallinae) on poultry production systems  
O. Sparagano (GB) |
| 14:45 | Invited | Invited | Invited | Invited |
| 14:45 | Denormalising poor young stock management – dealing with ‘farm blindness’  
J. Mee (IE) | Sensing sperm by maternal immune crosstalk: A potential mechanism for interfering with fertility in the cow  
A. Miyamoto (JP) | Lesions learned from the hypovitaminosis D kypotic pig model  
L. Amundson (US) | Porcine Reproductive and Respiratory Syndrome virus: Phylogenetic analysis of circulating strains in the Republic of Ireland from November 2016 to June 2017  
R. Fitzgerald et al. (IE) |
| 15:30 | Invited | Invited | Invited | Invited |
| 15:30 | Effects of milk replacer composition on gut and lung health and performance in veal calves  
A. de Greeff et al. (NL) | Relationship between resumption of ovarian activity, days open, energy balance and metabolic status in dairy cows with different dry period lengths in early lactation  
J. Ma et al. (NL) | Effect of lecirelin acetate intravaginal administration on rabbit reproductive parameters and welfare  
C. Munari et al. (IT) |
<p>| 16:00 | Coffee break | | | Coffee break |</p>
<table>
<thead>
<tr>
<th>Time</th>
<th>Session 12 (continued): Disease aspects in reproduction</th>
<th>Room 002</th>
<th>Session 13 (continued): Mineral homeostasis and associated diseases</th>
<th>Room 003</th>
<th>Session 14 (continued): Infectious diseases and pathobiology</th>
<th>Room 004</th>
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<tr>
<td>16:30</td>
<td>Extended lactation in high-yielding dairy cows: effects on reproductive performance and milk production</td>
<td>16:30</td>
<td>Effect of phosphorus intake during the transition period on plasma phosphorus content and hypocalcemia in dairy cows</td>
<td>16:30</td>
<td>Staphylococcus aureus related to bovine mastitis in Switzerland: Clonal diversity, virulence gene profiles, and antimicrobial resistance</td>
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<td>G. Niozas et al. (CH)</td>
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<td>P. Keanthao et al. (NL)</td>
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<td>N. Käppeli et al. (CH)</td>
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<td>16:45</td>
<td>Association between uterine involution in sows and reproductive performance in their next gestation</td>
<td>16:45</td>
<td>Dietary phosphorus restriction induces bone mobilization, affects acid-base balance and downregulates synthesis of fibroblast growth factor 23 in bone</td>
<td>16:45</td>
<td>Eradication program of Staphylococcus aureus genotype B in dairy cows in Canton Ticino (Switzerland)</td>
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<td></td>
<td>A. Meile et al. (CH)</td>
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<td>W. Gruenberg et al. (DE)</td>
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<td>L. Sesso et al. (CH)</td>
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<td>17:00</td>
<td>Timing of artificial insemination using fresh or frozen semen after automated activity monitoring of estrus in lactating dairy cows</td>
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<td>C. Tippenhauer et al. (DE)</td>
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<td>17:15</td>
<td>Intrauterine antibiotic treatment and bacterial growth in dairy cows with mild endometritis at the time of insemination</td>
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<td>K. Wagener et al. (CH/AT)</td>
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<td>17:30</td>
<td>Concluding remarks (Room 002)</td>
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**Session 12: Disease aspects in reproduction**

Mastitis and reproduction disorders in Holstein and Czech Fleckvieh dairy cows – comparison of occurrence in Czechia

P. Fleischer et al. (CZ)

Pre-farrowing supplement added to drinking water reduces stillbirth in sows

P. Langendijk et al. (NL)

Relations between negative energy balance and embryo harvest in donors of Latvian native cow

I. Šematoviča et al. (LV)

**Session 13: Mineral homeostasis and associated diseases**

Effects of green LED light during incubation and dietary mineral variety during rearing on tibia characteristics of broiler chickens at slaughter age

B. Güzel et al. (NL)

Calcium and nitrogen metabolism in growing sheep are affected by a menthol-based feed additive

A. Patra et al. (DE)

Concentrations of trace elements in serum of dry cows and corresponding reference intervals for the dry period

S. van der Drift et al. (NL)

Application of alternative lime amendment to soil increases forage molybdenum inducing copper deficiency

R. van Saun et al. (US)

Maternal-fetal hepatic mineral interactions

R. van Saun et al. (US)

Effect of dietary phytase and lactic acid treatment of cereals on gene expression related to Ca and P homeostasis along the intestinal tract, bones, and kidney in pigs

J. Vötterl et al. (AT)

Effect of voluntary calcium supplementation at calving on survival to the next lactation, milk yield and milk composition of subsequent lactation

J. Daniel et al. (NL)

Effect of supplementing Zn and Se in different ration around parturition on mammary health and natural antibodies in dairy cows

N. Mayasari et al. (ID)

Diselementosis as a risk factor of preeclampsia in dairy cows

V. Safonov and A. Chernitskiy (RU)

Change in plasma pH in cows induced hypocalcemia with Na2EDTA

Y. Ro et al. (KR)

**Session 14: Infectious diseases and pathobiology**

Occurrence and significance of *Dichelobacter nodosus* in sheep, cattle, goats and South American cameldids in Switzerland

F. Ardüser et al. (CH)

Development of a multivalent peptide vaccine for prevention of important infections in dairy cows

D. Bran-Barrera et al. (CA)

Ulvan activates chicken heterophils and monocytes through Toll-Like Receptor 2 and Toll-Like Receptor 4

N. Gurić et al. (FR)

Comparison of lung lesions at slaughter, their associated pathogens and serology in 9 farrow-to-finish Irish commercial pig herds

L. O’Brien et al. (IE)

Somatic cell count in milk of ewes and possible effect on milk yield and composition

V. Tanč et al. (SK)

Frequency of occurrence coagulase negative staphylococci and their antibiotics resistance in Lacaune breed

K. Tvarožková et al. (SK)

The effect of vaccination on calf growth, mortality and farm economy on a Finnish beef farm – A case study

A. Wainio et al. (FI)

Bovine mammary chimerin: mRNA expression, regulation, and effect on primary bovine mammary epithelial cells

C. Baumrucker et al. (US)

Examining the Microbial Composition of Animals Experimentally Infected with *Mycobacterium avium* subsp. *paratuberculosis*

C. Matthews et al. (IE)

**Session 15: Persistent health effects of juvenile development**

Influence of selection for growth and in ovo feeding on chicken body weight and immune organ size in the first two weeks of life

H. Abdel Aziz et al. (CH)

The effect of split-suckling in the postnatal period on piglet performances

M. Vandaele et al. (BE)