



# 37<sup>th</sup> Annual Western Canadian Dairy Seminar

## Knowledge is Power

**March 5 – 8, 2019**

**Sheraton Hotel, Red Deer, Alberta, Canada**



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### INTRODUCTION

In 2019 the Western Canadian Dairy Seminar will be celebrating 37 continuous years of providing novel ideas, information, and solutions relevant to current and emerging challenges of the Canadian dairy industry.

Topics covered in this year's seminar include:

- The Road Ahead
- Healthy Cows and Animal Welfare
- Fundamentals of Nutrition
- Advances in Genetics and Reproduction
- Optimizing Farm Management

In addition to the formal program, the seminar offers ample opportunity for participants to have informal discussions with the speakers and with industry service representatives. Come and meet our sponsors at the trade show.

### REGISTRATION

**\$295** on or before **February 5, 2019**

**\$345** after February 5, 2019

**Register and pay online at [www.wcds.ca/registration](http://www.wcds.ca/registration)**

Or fax (780-492-5771) or mail the registration form to:  
Western Canadian Dairy Seminar  
Dept. of Agricultural, Food and Nutritional Science  
4-10 Agriculture/Forestry Centre  
University of Alberta  
Edmonton AB T6G 2P5

Payment may be made by Visa, MasterCard, American Express or cheque. The Seminar registration fee **does not** include accommodation costs.

**LOCATION** Sheraton Hotel,  
3310 - 50th Avenue,  
Red Deer, Alberta, Canada T4N 3X9

### ACCOMMODATION

The Sheraton Hotel is holding a block of rooms for the Seminar until February 4, 2019. The hotel will continue to accept reservations as long as space is available.

**Please state that you are attending the "Western Canadian Dairy Seminar" when making hotel reservations.**

All reservations must be accompanied by a first night room deposit or guaranteed with a major credit card. Room rates are \$156 CAD (traditional), \$156 CAD (deluxe) and \$184 CAD (club room) plus taxes per night.

#### Reservations

**Phone:** (403) 346-2091 or 1-800-662-7197

**Email:** [reservations@sheratonreddeer.com](mailto:reservations@sheratonreddeer.com)

**Proceedings** can be ordered for \$40 for a printed copy or \$15 for a USB.

**Note:** The Program for the 2019 Western Canadian Dairy Seminar has been approved for **18 hours** of **Continuing Education Credits** by the **Alberta Veterinary Medical Association**

**For further information contact Kate Davies (Conference Coordinator) at 780-492-3236 or [wcds@ualberta.ca](mailto:wcds@ualberta.ca)**

# Program

## Tuesday, March 5, 2019

### 10:00 a.m. – 4:00 p.m. **Pre-Conference Farm Tour**

This tour will visit three local dairy farms with the focus on progressive and innovative dairy managers.

### 1:30 p.m. – 4:30 p.m. **Pre-Conference Workshop**

**Addressing Precision Feeding Strategies for Cows in Automated Milking Systems. Facilitator:** Greg Penner, University of Saskatchewan (Max 75).

This workshop will cover the theory associated with precision feeding strategies, diet formulation, cow responses associated with the implementation of precision feeding strategies, and challenges associated with imposing precision feeding in group-fed cattle. By the end of the workshop, participants should be able to improve their ability to assess precision feeding strategies under commercial settings.

6:30 p.m. - 9:00 p.m. **Registration**

8:00 p.m. - 10:00 p.m. **Opening Reception**

## Wednesday, March 6, 2019

### Morning Plenary Session – 8:30 am

- Welcome – **Gezinus Martens, Alberta Milk, Chair, WCDS Advisory Committee**
- Introductory Remarks and Conference Overview – **Mike Steele, Universities of Alberta and Guelph, Chair, WCDS Program Committee**

### **Session I: The Road Ahead**

- **Keynote Speaker**  
When Celebrity Culture and Science Clash – **Timothy Caulfield, University of Alberta**
- Public Trust in Dairy: So What? Now What? – **Crystal MacKay, The Canadian Centre for Food Integrity**
- Milk Supply Management After USMCA: An Economic Policy Analysis – **Al Mussell, Agri-Food Economic Systems**
- **Speaker Panel**

### Afternoon Concurrent Sessions – 1:40 pm

#### **Session II: Optimizing Farm Management**

- New Concepts in Dairy Cow Barn Design – **Gordie Jones, Central Sands Dairy LLC**
- Mission 2050: Building Envelopes for the Future – **Vern Osborne, University of Guelph**
- Mental Health in the Dairy and Livestock Production Sector – **Andria Jones-Bitton, University of Guelph**
- Understanding the Internal Frictions Weighing on Milk Supply Management – **Al Mussell, Agri-Food Economic Systems**
- **Speaker Panel**

#### **Session III: Fundamentals of Nutrition**

- Strategies to Alleviate Aflatoxin Deleterious Effects on Performance, Inflammation, and Oxidative Stress in Dairy Cows – **Phil Cardoso, University of Illinois**
- What is Gut Health and How to Improve It? – **Kees Plaizier, University of Manitoba**
- Feeding Management for Cows in Automated Milking Systems: What We Know and What We Still Need to Learn – **Greg Penner, University of Saskatchewan**
- Consistency is Key When it Comes to Feed Consumption in Dairy Cows! – **Trevor DeVries, University of Guelph**
- **Speaker Panel**

**Evening Banquet Entertainment:** Tribute artist and comedian **Corny Rempel** will be performing Johnny Cash

## Thursday, March 7, 2019

### Morning Plenary Session – 8:30 am

#### **Session IV: Student Research and Producer Panel**

- **Student Research Presentation Competition**  
Five graduate students will present their dairy-related research findings.
- How I Define Efficiency on My Farm – **Producer Panel Presentations**  
Three dairy producers will discuss the different aspects of efficiency on their farms.
- **Producer Panel**

## Afternoon Concurrent Sessions – 1:30 pm

### **Session V: Healthy Cows – Healthy Milk**

- Better Fresh Cows – **Gordie Jones, Central Sands Dairy LLC**
- Being a Mom is Hard: Calcium Demands of Early Lactation Dairy Cows – **Jessica McArt, Cornell University**
- Bovine Leukemia Virus in Your Herd? Get Rid of It! – **Frank van der Meer, University of Calgary**
- No Guarantees with Johnes's Disease – **Jeroen De Buck, University of Calgary**
- **Speaker Panel**

### **Session VI: Advances in Genetics and Reproduction**

- Impact of Feeding Amino Acids on Health, Performance, and Fertility of Dairy Cows – **Phil Cardoso, University of Illinois**
- Integration of Reproductive and Genetic Inventory Management – **Mark Carson, EastGen Genetics**
- Timed AI in Context: Fitting Reproductive Programs to Cows' Physiological Needs – **Rafael Bisinotto, University of Florida**
- Using Activity Monitors to Modify Reproductive Programs – **Ronaldo Cerri, University of British Columbia**
- **Speaker Panel**

## **Reception**

To be held following Sessions: 5:00 pm – 6:30 pm

**Friday, March 8, 2019**

## **Morning Plenary Session – 8:30 am**

### **Session VII: Improving Animal Welfare with proAction**

- Managing Robot Herds to Optimize Health and Welfare – **Trevor DeVries, University of Guelph**
- Why Do Some Calves Die and Others Thrive? Exploring Factors Impacting Calf Health – **David Renaud, University of Guelph**
- What are the Options to Improve the Comfort and Welfare of Dairy Cows? – **Elsa Vasseur, McGill University**
- Key Considerations for the Implementation of a Foot Health Program – **Laura Solano, Farm Animal Care Associates**
- **Speaker Panel**
- **Closing**

*Nominate an individual for the John J. Kennelly WCDS Award of Merit.  
More details at [www.wcds.ca](http://www.wcds.ca)*

# **Our 2019 Speakers**



### **Keynote Speaker**

**Timothy Caulfield** is a Canada Research Chair in Health Law and Policy, a Professor in the Faculty of Law and the School of Public Health, and Research Director of the Health Law Institute at the University of Alberta. His interdisciplinary research on topics like stem cells, genetics, research ethics, the public representations of science and health policy issues has allowed him to publish over 350 academic articles. He contributes frequently for the popular press and is the author of two national bestsellers. Timothy also has a strong social media presence and is the host and co-producer of the documentary TV show, A User's Guide to Cheating Death.



**Rafael Bisinotto** is an Assistant Professor within the Food Animal Reproduction and Medicine Service at the College of Veterinary Medicine in the University of Florida. His main research focus is on the understanding of reproductive biology and strategies to improve reproductive performance in dairy herds.



**Mark Carson** was hired by EastGen to assist producers with analysis and improvements in herd reproductive performance. Mark now manages the Reproductive Solutions Team and has a keen interest in working with farm data to find management opportunities and using technology to improve herd performance.



**Phil Cardoso** is an associate professor at the University of Illinois at Urbana-Champaign. His research builds from questions asked by dairy producers and focuses on the impact of nutrition on metabolism, reproduction and health in dairy cows, as well as mechanisms to improve forage quality.



**Ronaldo Cerri** is an Associate Professor at the University of British Columbia. His research focuses on sustainable technologies to improve reproduction efficiency in cattle, such as the use of automated methods for detection of estrus and ovulation. He strives to understand the effects of inflammation and health disorders.



**Jeroen De Buck** is a full Professor in the Department of Production Animal Health at the University of Calgary. His research focuses on bovine bacterial infections, in particular Johne's disease, bovine mastitis and digital dermatitis. Jeroen is an expert on bacterial pathogenesis, bacterial genomics and diagnostic test development.



**Trevor DeVries** is a Professor in the Department of Animal Biosciences at the University of Guelph and Canada Research Chair in Dairy Cattle Behavior and Welfare. Trevor leads a highly productive research program focused on understanding the links between dairy cow behaviour, nutrition, management, and welfare.



**Gordie Jones** is an independent dairy performance consultant and a partner of Central Sands Dairy LLC. He has consulted with dairy producers and veterinarians across the U.S. and globally regarding herd performance, nutrition, better fresh cows, dairy cow environment and housing, expansion, dairy management, personal SOP's and cow comfort.



**Andria Jones-Bitton** is a veterinarian and Associate Professor of Epidemiology in the Department of Population Medicine at the Ontario Veterinary College, University of Guelph. Her current research centres on the epidemiology of mental health and resilience in the agricultural and veterinary sectors. Andria is proud to work with Canadian farmers, veterinarians, and students.



**Crystal MacKay** is the President of The Canadian Centre for Food Integrity, with a vision for helping Canada's food system earn trust by providing research, resources, dialogue and training. Crystal is a dynamic presenter who has delivered hundreds of presentations to a broad range of audiences.



**Jessica McArt** is an Assistant Professor at Cornell University. Jessica performs clinical service for the Ambulatory and Production Medicine Clinic where she serves as Section Chief, teaches veterinary students, and conducts applied research on periparturient diseases in dairy cattle.



**Al Mussell** is the Research Lead, and founder, of *Agri-Food Economic Systems, Inc.* His areas of research expertise are farm management, agricultural marketing, and agricultural policy. For fifteen years, Al served as Senior Research Associate at the George Morris Centre. Prior to that Al worked as an economist in the milk procurement division of Land O'Lakes, Inc.



**Vern Osborne** is a Professor of Ruminant Nutrition at the University of Guelph. He has taught for over 30 years on nutritional dairy management and environmental physiology and animal housing. Vern is currently the Science and Design Lead for the Mission 2050 project, a conceptual framework plan that would replace Guelph's/OMAFRA's dairy, swine and poultry research facilities.



**Greg Penner** is an Associate Professor and Centennial Enhancement Chair in Nutritional Physiology in the Department of Animal and Poultry Science at the University of Saskatchewan. Greg's research covers forage utilization, ruminant nutrition, and regulation of gut function in cattle. He has published over 95 peer-reviewed papers and provided over 60 invited presentations.



**Kees Plaizier** is a Professor at the University of Manitoba. His research program focuses on enhancing the health and nutrient utilization of dairy cows, environmental sustainability of dairy farms, and the evaluation of novel feeds for cattle. He has authored or co-authored over 90 scientific journal manuscripts, and articles, extension materials and technical reports.



**David Renaud** is a veterinarian and epidemiologist working at the University of Guelph. His research focuses on determining factors that impact male calf health in the veal industry. He hopes to find solutions to combat antimicrobial use while improving calf health and welfare. Dave is also a practicing veterinarian who focuses on preventative medicine to improve the health and welfare of dairy cows and calves.



**Laura Solano** is a dairy veterinarian, researcher, and consultant. She holds a veterinary degree from the National University of Costa Rica, and a PhD in Epidemiology from the University of Calgary. Laura is currently the principal consultant of Farm Animal Care Associates, where she delivers dairy animal care extension and outreach programs, with a special focus on foot health.



**Frank van der Meer** is an Associate Professor at the University of Calgary, Faculty of Veterinary Medicine. He studies viral diseases of cattle, specifically BVDV and Bovine Leukosis Virus (BLV). Frank recently initiated the development of a BLV control program for Alberta. He is also investigating which viruses infect wildlife in the Canadian arctic and what impact these viruses may have.



**Elsa Vasseur** is an Assistant Professor at McGill University and Chairholder of the NSERC/Novalait/Dairy Farmers of Canada/Valacta Industrial Research Chair in Sustainable Life of Dairy Cattle. Elsa's research program focuses on the links between welfare and longevity, to provide enough information to formulate recommendations for animal welfare improvement on dairy farms.



# 2019 Western Canadian Dairy Seminar - Registration Form

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## Registration Fees

- Register and pay online at [www.wcds.ca/registration](http://www.wcds.ca/registration)
- **The registration fee includes a USB copy** of the proceedings, three breakfasts, two luncheons, five nutrition breaks, and two evening receptions. All fees include GST.
- **Note:** Information marked with \*\* will appear on your **nametag** at the Seminar.
- Please use a separate sheet for each person being registered.
- **NEW:** Printed copies of the proceedings are available for purchase at **\$40 each** (including GST).
- For **cancellations** received prior to **February 20, 2019**, registration fees will be refunded minus a \$50 administration fee. Cancellations received **after February 20 will not be refunded**. Substitutions are permitted.
- For **more information** please contact **Kate Davies**, Conference Coordinator at (780) 492-3236 or [wcds@ualberta.ca](mailto:wcds@ualberta.ca)

	Cost		#	=	Total
<b>Early Registration</b> (payment must be <b>received by February 5, 2019</b> )	\$295	x		=	
<b>Late Registration</b> (payment <b>received after February 5, 2019</b> )	\$345	x		=	
<b>One day registration</b> (specify which day) - Wednesday <input type="checkbox"/>	\$150	x		=	
- Thursday <input type="checkbox"/>					
<b>Friday morning only</b>	\$80	x		=	
<b>Student Registration</b>	\$85	x		=	
<b>Optional:</b>					
<b>Important:</b> In order to register for the Farm Tour or the Workshop each person must also be registered for a portion of the seminar from Wednesday to Friday. The Farm Tour and the Workshop are held at the same time therefore each person can only attend one of these events					
<b>Pre-Conference Farm Tour</b> (Tuesday: maximum 90)	\$50	x		=	
<b>Pre-Conference Workshop:</b> (Tuesday: maximum 75) "Addressing Precision Feeding Strategies for Cows in Automated Milking Systems"	\$65	x		=	
<b>Banquet</b> - Wednesday evening <small>*Please let us know of any special food requirements</small>	\$50	x		=	
<b>Proceedings</b> – One <b>USB copy</b> of the proceedings is <b>included</b> with registration					
Printed copy of the proceedings	\$40	x		=	
Additional proceedings on USB	\$15	x		=	
<b>Total fee enclosed</b>					

- ❖ How did you hear about the WCDS? (e.g. website, word-of-mouth, advert): \_\_\_\_\_
- ❖ Is this your first time attending the WCDS?: Yes \_\_\_ No \_\_\_ If 'No', how many times have you attended?: \_\_\_

<input type="checkbox"/> <b>Cheque enclosed</b>  made payable to  <b>"Western Canadian Dairy Seminar"</b>	<b>Or pay by</b> Visa # _____  MasterCard # _____ AMEX # _____  Print Name on Card _____ Expiry Date: _____  Signature: _____ CVS Code (on back of card): _____
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**Register and pay online at [www.wcds.ca/registration](http://www.wcds.ca/registration)** or fax completed form to (780) 492-5771, or mail to: Western Canadian Dairy Seminar, c/o Department of Agricultural, Food and Nutritional Science, 4-10 Ag/Forestry Centre, University of Alberta, Edmonton, AB T6G 2P5 Canada

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