

TALKS AND BIOS

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John Basarab, Alberta Agriculture & Forestry



The Benefit of Genomics Tools in Managing Fertility and Stayability in Commercial Beef Cow Herds

The application of genomics in the beef industry has progressed more slowly than in other livestock species in part due to the degree of fragmentation, lack of integration and profitability within the industry. Initial applications tended to be limited to the pure breed industry due to the high value of the animals and their use for breeding. Over time, the collection of larger volumes of genomics data within the pure breed populations and lower costs as the technology matures have allowed the development of tools targeting the commercial beef producer. One tool developed in Alberta shows particular promise in allowing the commercial cow/calf producer to select for greater fertility and stayability and therefore produce more pounds of weaned calf and more profits. These developments are also expected to lead to the development of commercial cattle gEPDs, including maternal trait gEPDs.

John Church, Thompson Rivers University



The Use of Unmanned Aerial Vehicles (UAVs) to Monitor Cattle

Dr. John Church is an Associate Professor of Natural Resource Science at Thompson Rivers University (TRU) in Kamloops, British Columbia, and Research Chair in Cattle Industry Sustainability. John started Canadian Rocky Mountain Ranch, a large bison and elk operation east of the Rockies just southwest of Calgary, Alberta, in 1997. In addition to practical and direct bison industry experience, John served for eight years as the Alberta provincial animal welfare specialist, and as Chair of the Scientific Committee for the Canadian Bison Code of Practice.

Dr. Church earned his PhD in Agriculture from the University of Alberta in 1997, studying the effects of production practices on the behaviour and management of bison, elk and cattle on farms. He now leads a multidisciplinary research team at TRU dedicated to the exploration and invention of innovative practices and technologies leading to the sustainability and enhancement of the cattle and bison industry, rangelands, and meat production and related products.

The focus of Dr. Church's research program is on new opportunities for beef and bison producers in the areas of value-added and branded meat production, which includes human and

environmental health. His research program uses drones for precision ranching, with a goal towards improved management of the land base as well as the animals.

Barry Irving, University of Alberta

Barry Irving



Barry is manager of the agricultural research stations, including the Kinsella and Mattheis Research Ranches, for the University of Alberta. His background is in integrated land use, especially on rangeland. He is a Professional Agrologist and an active member (currently President) of the Society for Range Management, a diverse international group of 2,200 members interested in the management of rangeland. Barry and the staff at the University of Alberta ranches use moderate cattle-stocking rates, rotation, seasonal grazing, water developments, fire and other means to manage rangeland vegetation.

Barry is past coach of the University of Alberta Range Team, which has won over 160 awards in international competitions sponsored by the Society for Range Management. He holds a BSc (Forestry), MSc (Range Management), and PhD (Plant Science), all from the University of Alberta.

When Old Becomes New Again...

Barry Irving's career spanned 35 years in numerous roles that he describes as that of Practical Manager responsible in various capacities for integrating beef production with rangeland management.

After a long career and a "retirement" lasting several weeks, Barry will deliver a brief overview of how practices evolve (and in some cases revolve) around three general themes: the grassland / forage interface, fitting the cow to the environment, and the carbon future.

The Waldron

The Waldron Ranch Grazing Cooperative was established in 1962 when 116 Alberta ranchers purchased 44,000 acres of grazing land on which to graze their cattle. Since then, 21,000 more acres have been added. An uncommon element of the Ranch is that the native grasses that it aims to maintain hold much of their nutritional value through the winter, benefiting the grazing cattle. Given the importance of the land and the well-being of their cattle, the cooperative and its management have focused on how to manage the health of the grasslands and watersheds, making them the early innovators of many of today's land management practices.

Mike Roberts – Ranch Manger, Waldron Grazing Cooperative

Mike was raised 10 miles south of the Waldron Grazing Cooperative. His experience growing up on a ranch and observing land management practices that varied widely in their implementation and sustainability, combined with 20 years in the Okanogan, where he witnessed the harm caused by invasive species, has provided him a special perspective for his current role as Ranch Manger (and shareholder) of the Waldron Grazing Cooperative.

Gerald Vandervalk – Board Chair, Waldron Grazing Cooperative

Gerald grew up on a ranch west of Clairsholm, Alberta. He has a personal interest in the environment, particularly as it applies to rangeland and water conservation. Gerald is also a shareholder in the Cooperative, manages a 430-head cow-herd where rotational grazing and custom water installations play an important role in management.

Tim Nelson – Vice-Chair, Waldron Grazing Cooperative

Also a shareholder, Tim ranches west of Stavely, Alberta, managing a herd of approximately 200 cows, and comes with a distinguished pedigree as it relates to the Cooperative. Tim's family played a prominent role in its establishment and has been heavily involved with its management and governance over the years.

Demonstration Site Focus

Grazing Exclusion – this portion of the Cooperative has operated under a grazing exclusion for the past 30+ years, and demonstrates the impact that the removal of two important forces (fire and grazing) can have a grassland environment. And while the result may be pretty to look at, it is neither natural nor economical. It does however demonstrate the value of diversity, economical and otherwise.

Managed Grazing – also referred to as cell or intensive grazing. The plots to be viewed / discussed have been “managed” for approximately 7 years. Discussion will focus on the key learnings and unexpected findings as they relate to grassland and livestock health.

Sheep Grazing and Leafy Spurge – the sheep were an addition to the Cooperative after spending approximately \$15,000/year for custom spraying in an attempt to control the spread of leafy spurge. The sheep have largely removed an expense line from the budget, act as a profit-centre in their own right in addition to providing far superior spurge control.

Cattle – one of the benefits to shareholders of the Cooperative include cattle-grazing-rights on cooperative lands. Here, the focus will be on animal husbandry practices and discussion on Adaptive Managed Padocks.