

Saskatchewan Forage Network
Project Final Report
2012-2018

Project Summary:

The Saskatchewan Forage Network (SFN) was initiated by the Saskatchewan Forage Council with a mission *'to facilitate a collaborative approach to research, technology transfer, and industry development for all forage and livestock industry stakeholders in Saskatchewan through efforts which complement and expand the current activities and resources at work within the province and across Canada'*.

Rather than a legal entity, the Saskatchewan Forage Network was formed as a working collaboration of interested and engaged stakeholders. Involvement was open to any industry group where forage was a shared priority. A steering committee comprised of representatives from industry organizations participating and engaged in the initiative provided oversight and direction. The Saskatchewan Forage Network was led by a Coordinator (Janice Bruynooghe) who was charged with developing and managing the overall strategy and activities under the direction of the Steering Committee. Through this project significant results were accomplished including the active participation of nine industry organizations represented on the Network Steering Committee. The Network liaised directly with researchers to encourage and expand communication with industry, supported by the creation and delivery of the Saskatchewan Forage Network Graduate Student Awards. An expansion and enhancement of the Saskatchewan Advisory Council on Forage Crops meeting was accomplished, and direct input provided to the creation and development of a Livestock & Forage Centre of Excellence at the University of Saskatchewan. Recognition of significant deficiencies in forage research funding and capacity was attained resulting in renewed investment in priority areas. These outcomes are representative of the many positive benefits that are the result of a successful Saskatchewan Forage Network.

Project Objectives and Deliverables:

The Saskatchewan Forage Network (SFN) was created in 2012 with a vision to grow the forage and livestock industry's future for producer profitability with a specific focus on collaboration, coordination and communication.

For the purpose of the Network's areas of focus, "forage" includes tame species, native rangelands, perennials and annuals – from forage seed production through to end-users in the livestock sectors, while sustaining important ecosystems and resources.

Over the entire timeframe of the Saskatchewan Forage Network project numerous successful outcomes and deliverables were achieved including:

- an increased awareness of the critical lack of forage research funding and capacity. The efforts of the SFN played a central role in turning the tide towards increased forage research project

funding, greater numbers of forage researchers, and expanded investment in research infrastructure and capacity. For example, investment in forage projects through the Agriculture Development Fund (ADF) increased from 7% (\$282K) of all funded livestock and forage projects in 2014 to 27% (\$1.689M) in 2018. Over the same time period, total ADF funds allocated to forage and livestock research as a percentage of total research funding, including crops, increased from 37% (\$4.188M) to 45% (\$6.364M). Similarly, investments by the Beef Cattle Research Council (BCRC) to forage research as a percentage of total research expenditures increased from 10% (\$413K) for the 2001-2008 period to 30% (\$6M) for 2013-2018;

- re-investment in research capacity through hiring of scientists within Agriculture and Agri-Food Canada (six new scientists across Canada including Dr. Jillian Bainard at Swift Current), by universities (Dr. Jonathan Bennett, UofS) and by SK Agriculture (Dr. Bill Biliget, Strategic Research Program (SRP) Forage Research Chair). Input through the SFN encouraged the creation of these new positions with a focus on industry-directed priorities;
- re-alignment of research resources including the creation of the Livestock & Forage Centre of Excellence (LFCE). Direct involvement in the development of the LFCE ensured that all facets of the forage and livestock industry were included. Specific focus areas included development of governance processes, formation of a Strategic Advisory Board, and creation of a Centre Director position. A Research Visioning Workshop (November 2017) provided a forum for direct industry engagement and input to coordinated research strategies;
- input into development of long-term vision/strategy plans with targeted priorities to benefit all sectors;
- streamlined and strategic investment of research funds. The SFN facilitated the active engagement of industry sectors from forage seed to livestock;
- industry investment, directed through the SFN, for Graduate Student Awards (2014-2017). A total of \$129,000 supported seven research projects including digestibility of barley silage for dairy cattle, development of new sainfoin and crested wheatgrass lines, improving grazing capacity through introduction of bloat free legumes, and developing grassland songbird management targets for multi-species conservation of native rangelands. This investment leveraged additional research funding sources while training future scientists; and
- restructure and delivery of the SK Advisory Council on Forage Crops (SACFC) meeting. In partnership with SK Agriculture, this annual forum brings together governments, university, researchers, funders, non-government organizations, industry groups and producers to discuss research priorities and determine future outputs.

Graduate Students Awards:

The Saskatchewan Forage Network created the unique opportunity for forage and livestock groups to come together to jointly provide financial awards in support of graduate students pursuing research focused on the priorities of the industry. For the period from 2014-2017 Saskatchewan Forage Network Graduate Student Awards included:

- Mr. Basim Refat, PhD candidate, worked with graduate supervisor Dr. Peiqiang Yu in the Department of Animal & Poultry Science at the University of Saskatchewan conducting research

as part of ADF project 20140281 'Comparison of Barley Forage with Highest and Lowest Digestible Fibre (NDF) in High Production Dairy Cattle'. Total of \$30,000 over three years;

- Mr. Surendra Bhatara, an MSc candidate, worked under the supervision of Dr. Bill Biligetu in the Department of Plant Sciences at the University of Saskatchewan. His project focused on development of new sainfoin lines. Total of \$20,000 over two years;
- Mr. Samuel Tandoh, MSc candidate, worked under the supervision of Dr. Biligetu on a project exploring 'Development of crested wheatgrass lines with improved forage nutritive value' (ADF project 20140046). Total of \$20,000 over two years;
- Ms. Breeanna Kelln, under the direction of Dr. Bart Lardner (Western Beef Development Centre) led a project titled 'Improving grazing capacity through introduction of bloat free legumes in existing pasture stands' (ADF project 21040193) as part of her PhD program. Total of \$20,000 over two years;
- Ms. Amara Gungaabaya, MSc candidate studying under the supervision of Dr. Bill Biligetu, was awarded a total of \$20,000 over two years to support work on a project titled 'Evaluation of contrasting forage pea cultivars in mixtures with cereals for greenfeed production in Saskatchewan' (ADF project 20150040);
- under a project led by Dr. Michael Schellenberg (AAFC Swift Current) titled 'Increasing forage production with perennial native legumes' (ADF project 20150177) a total of \$10,000 over two years was awarded to support an MSc student; and
- Mr. Phil Rose, an MSc candidate at the University of Regina under the supervision of Dr. Stephen Davis (Environment Canada) was awarded a total of \$9,000 to support his work on 'Developing grassland songbird management targets for multi-species conservation of mixed-grass Prairie rangelands'. A portion of the funding provided by the Saskatchewan Forage Network allowed the student to leverage matching support through the Mitacs Accelerate program.

Benefits for the Saskatchewan Livestock and Forage Industry:

This project played an integral role in advancing the forage and livestock industry in Saskatchewan. Research project funding and capacity has been expanded, engagement with stakeholders and partners, both interprovincially and nationally, has grown, and a critical level of focus upon forage research is a key part of the new Livestock and Forage Centre of Excellence. These very positive outcomes clearly support and provide a foundation for enhanced profitability for Saskatchewan producers.

Saskatchewan Forage Network Steering Committee:

Network Steering Committee members included: Native Plant Society of SK (Chet Neufeld), SK Bison Association (Les Kroeger, Avery Shepherd), SK Cattlemen's Association (Michael Spratt), SK Forage Council (Aaron Ivey, Leanna Rousell), SK Forage Seed Development Commission (David Maxwell, Ray McVicar), SK Leafcutters Association/SK Alfalfa Seed Producers Association (Andrew Lindsay-Hawkins, Jeffrey Freedman), SK Prairie Conservation Action Plan (Orin Balas), SK Sheep Development Board (Arlette Seib), SK Stock Growers Association (Henry McCarthy, Chad MacPherson), and SaskMilk (Jack Ford). Through the steering committee, industry organizations provided oversight and direction in order to ensure that the vision, mission and objectives of the Saskatchewan Forage Network were efficiently and successfully accomplished.

Project Support:

Industry partner groups' significant in-kind contributions to this project were essential and a very valued component for the successful delivery of activities and outcomes.

Financial contributions over the duration of the project were provided by:

- Agriculture and Agri-Food Canada through the Canadian Agricultural Adaptation Program (CAAP). In Saskatchewan, this program was delivered by the Agriculture Council of Saskatchewan;
- Saskatchewan Beef Industry Development Fund (SBIDF) administered by the Saskatchewan Cattlemen's Association;
- Saskatchewan Ministry of Agriculture and the Canada-Saskatchewan Growing Forward 2 bi-lateral agreement
- Saskatchewan forage and livestock industry groups and non-government organizations including Saskatchewan Bison Association (SBA), Saskatchewan Cattlemen's Association (SCA), Saskatchewan Forage Council (SFC), Saskatchewan Leafcutters Association (SLA), Saskatchewan Forage Seed Development Commission (SFSDC), SaskMilk, and Ducks Unlimited Canada.