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- The Manitoba Rural Adaptation Council;
- Manitoba Agriculture, Food and Rural Initiatives; and
- All producers and industry representatives that provided input at the workshop and at other times.

Definition of Terms

There are several terms used in this Strategic Plan document that are not clearly defined or that may have multiple meanings. The meanings of the key terms that are used in this document are shown below.

- **Forage finished beef** (also called forage fed or grass-fed) differs from other beef production systems in that higher levels of forage are used in the animal's growing and finishing and feeding high starch grains are avoided. Production protocols may call for "natural" production practices including avoidance of non-therapeutic antibiotics and growth hormones.
- **Sustainable agricultural systems** integrate three main goals: environmental stewardship, farm profitability, and prosperous farming communities.
- **Holistic agricultural systems** make the fullest use of land resources and the best utilization of available capital and labour. It recognizes the vital relationship between soil, plant, animal and man, and seeks to care for land and its components through effective grassland and cropland management to maximize yield, food quality and profitability without the extensive use of chemicals and without damaging the ecology. It considers the welfare and health of poultry, cattle, sheep and goats, their nutritional needs through the various stages of their lives, and the best way to balance their diets.

In this document the authors have chosen to use the term **Sustainable** Agricultural Practices to represent the best of both sustainable and holistic systems and to include the broad range of environmentally, financially and socially beneficial practices.

Executive Summary

This Strategic Plan and Implementation Plan were developed during 2009 and utilized input from many producers and industry representatives. Much of this input was provided at a Strategic Planning Workshop that was held in Portage la Prairie on April 8, 2009.

The highlights of this Strategic Plan and Implementation Plan are shown below.

Notable facts about the Manitoba forage and grassland industry include:

- The forage and grassland industry is a significant factor in Manitoba's agricultural and total economy. Tame hay acreage, at 2.45 million acres, is Manitoba's second largest acreage crop; only wheat and canola are larger in terms of acreage (wheat at ~3 million acres and canola at 2.5 to 3 million acres). Manitoba's tame hay acreage increased 13% from 2001 to 2008. If improved and unimproved pasture is included the total acreage is 7.6 million acres or approximately 45% of Manitoba's arable acres;¹
- Manitoba is home to approximately 1.5 million head of cattle (including more than 600,000 beef cows and approximately an equal number of calves). Manitoba is a major producer of calves that are generally finished to slaughter weight in Alberta or the United States. The percentage of Manitoba's beef cattle farms that have achieved 51+% of their income from beef cattle have ranged from as low as 55% in 2004 to 70% in 2006 and were estimated at 56% in 2008). Thus, most of Manitoba's beef farms are cow-calf operations and are integrated with the production of other livestock and/or grain. Cow-calf operations are major users of forage and grasslands. The average number of beef cows per farm has increased from 52 in 2001 to an estimated 67 beef cows per farm in 2008.

Industry participants report that several **positive trends** have occurred in recent years in the forage and grassland industry including:

- Increased focus on hay quality and grazing technologies;²
- Higher education levels among young producers;³
- Increased interest in biomass as a source of renewable energy;⁴
- Increased interest in niche products (e.g. "natural" beef and lamb); and
- Growing recognition of the environmental benefits of forage production (e.g. bioremediation, carbon sequestration and other types of Ecological Goods and Services).⁵

¹ 2008–2009 Summary of Major Crop Production. Manitoba Agriculture, Food and Rural Initiatives. <http://www.gov.mb.ca/agriculture/statistics/aac10s09.html>

² Ten-Year Anniversary Grazing School Survey, Manitoba Forage Council and Manitoba Agriculture, Food and Rural Initiatives, 2008

³ Ibid.

⁴ Biomass energy, or bioenergy, refers to all forms of renewable energy that are derived from plant materials produced by photosynthesis. Biomass fuels can be derived from wood, agricultural crops and other organic residues. These fuels can be obtained from many sources in Canada, including sawmills, woodworking shops, forest operations and farms. Source: Manitoba Science, Technology, Energy and Mines website (<http://www.gov.mb.ca/stem/energy/initiatives/biomass.html>).

Industry participants also report that several **negative trends** (i.e. **challenges**) have occurred in recent years in the forage and grassland industry including There have also been several negative trends in recent years in the forage and grassland industry including:

- Increased economic pressures on livestock producers caused by higher and more volatile operating costs (e.g. fuel, fertilizer and feed prices) and pressure from low livestock prices (largely because of BSE in the early 1990s and the higher Canadian dollar versus the US dollar and Country of Origin Labeling in recent years). The prices of most types of livestock were lower in 2008 than in 2003;⁶ and
- Decreased levels of forage and livestock research funding over the last decade (especially funding by the public sector) and the introduction of fewer new forage varieties. In 2007, the Canadian private sector seed industry invested over \$56 million in plant breeding and research and the industry plans to invest more than \$106 million by 2012. However, 75% of the investment will be in canola; 12% in soybeans; 9% in corn; and 2% in cereals. This leaves 2% of the breeding budget for all other crops including forages.⁷

There are many **strategic opportunities** for Manitoba's forage and grasslands including:

- Improved agronomic and farm management practices including:
 - More growing of annual and perennial forages that fix nitrogen; and
 - More use of manure (where appropriate) to reduce purchases of fertilizer;
- Improved transportation and logistics systems to more efficiently move hay to export markets;
- Improved transportation and logistics systems to enhance opportunities for processing livestock locally;
- Improved marketing systems for hay including value chain initiatives to encourage the equitable sharing of value created by the more efficient movement;
- Development of more niche livestock processing initiatives;
- Improved varietal and agronomic research that is focused on local producers' and industry's needs (e.g. regional adaptation trials);⁸
- Improved education and extension to promote the benefits of using new technologies to increase production and marketing efficiencies (producer clubs, internet, distance learning, etc.);
- Improved industry leadership and government policy development (e.g. the "championing" of leading-edge sustainability concepts) to move the industry forward; and
- Improved liaison and consultation among industry groups and between industry groups and government departments.

⁵ Environmental & Rural Stewardship - Remuneration for Agriculture in Manitoba, a Recommended Framework for introducing a province-wide Social and Ecological Goods and Services incentive program, Manitoba Cattle Producers Association, November 17, 2008.

⁶ Livestock Prices 2003-2008, Manitoba, Manitoba Agriculture, Food and Rural Initiatives, <http://www.gov.mb.ca/agriculture/statistics/aac10s11.html>

⁷ Canadian Seed Trade Association Quick Facts, http://www.cdnseed.org/about_us/fast_facts.asp

⁸ CSTA Variety Breeding Investment 2007

Several **strategic solutions** were developed to capitalize on the opportunities and to mitigate the challenges that face the forage and grassland industry, under five broad initiative categories, including:

- Ensure that research addresses the Manitoba forage and grassland industry's needs;
- Enhance extension services to improve forage and grassland producers' agronomic and farm management/marketing practices;
- Enhance the capacity of the Manitoba forage and grassland industry to develop leadership and sustainability strategies;
- Improve market opportunities through improved logistics and infrastructure, particularly to move hay to export markets and to process livestock locally for niche markets; and
- Improve the image of agriculture in general and forage/grassland production in particular.

The **key strategic solutions** are shown below within each of these five categories.

1. Ensure that research addresses the Manitoba forage and grassland industry's needs.

To ensure that research addresses the needs of the Manitoba forage and grassland industry the industry needs to:

- Collaborate with representatives from MFC, MCPA, U of M and AAFC to coordinate forage/grassland research in Manitoba (i.e. to set research priorities, develop research initiatives and assist in securing funding for implementation) This working group would include:
 - Forage/livestock producers;
 - Industry representatives;
 - Researchers; and
 - Government;
- Initiate the development of a National Centre of Excellence for Forage and Grassland Development and a Manitoba Forage and Grassland Foundation to initiate and support research and technology transfer that:
 - Is based on successful models adopted in other regions;
 - Solicit participation from government, industry and producer groups;
 - Seek out funding sources including foundations etc. and/or create a forage and grassland foundation.
 - Work with research scientists to identify and seek funding for projects that address Manitoba issues (e.g. forage adaptation trials); and
- Encourage the development of more systems-based approaches to research (e.g. the Marchand/La Broquerie Forage/Cattle/Hog Manure project by the University of Manitoba) where many disciplines are involved in the research.

2. Enhance extension services to improve forage and grassland producers' agronomic and farm management/marketing practices.

To improve agronomic and farm management practices and marketing opportunities, the Forage and Grassland Industry needs to:

- Prioritize and coordinate extension programs to ensure information is readily available to producers while reducing duplication of efforts. Strategies to accomplish this include:
 - Develop an annual workshop (and/or expand MAFRI's semi-annual horizontal team meetings) to include all relevant extension organizations to share insights regarding the current and future extension priorities to coordinate their activities and to identify collaboration opportunities. This workshop could identify the most effective strategies to inform new and current producers regarding new and more adaptable forage/livestock management practices including: rangeland management practices; grazing practices; stored forage techniques; and riparian and environmental concerns; and
 - Develop a document which summarizes all of the extension efforts that are being conducted by the different agencies (government and non-government) in the province and place this document on the MAFRI, MFC, DU, U of M, AAFC, MCPA and other web sites;
- Ensure that existing and future marketing related extensions initiatives include to:
 - Promote the development of new business opportunities including producer-based value chains and encourage the development of new funding programs to assist value chains with start-up costs;
 - Educate producers regarding the specific needs of exporters and customers in importing countries who want consistent supplies of high quality hay in small or larger square bales; and
 - Establish a workshop/seminar to examine extension gaps (e.g. production protocols and marketing) for forage fed beef production systems; and
- Encourage governments and telecommunications companies to provide high-speed internet service to all areas of Manitoba.

3. Enhance the capacity of the Manitoba forage and grassland industry to develop leadership and sustainability strategies.

For the Manitoba forage and grassland industry to be successful it is necessary to have a strong organization to provide leadership and coordination. In the past (and the foreseeable future), the Manitoba Forage Council has served this role. In order to continue to fulfill this role as the primary forage and grassland organization for Manitoba producers and the broader industry the MFC needs to have adequate and sustainable funding. The following points highlight the industry needs and the role of the MFC and potential operational and funding avenues for the organization:

- The industry needs a coordinator and administrator of resources for extension and research projects to gather producer input to improve these projects such as:
 - Grazing School;
 - Grazing Clubs; and
 - Forage Adaptation trials, etc.;
- The industry needs to re-establish priorities (for research, extension, government policy changes) annually and to develop an on-going survey system to determine the current needs and priorities of the industry;
- The industry needs to provide leadership and participate in the development of a Canadian Forage & Grassland Council (CFGAC) to reflect the concerns and issues of Manitoba forage/livestock producers on national and international issues. Once established, the MFC may have an opportunity to provide an administrative support role to this organization;
- The industry needs to promote the multi-functionality benefits of forage and livestock production including those related to Ecological Goods and Services (e.g. greenhouse gas mitigation/ carbon sequestration, biomass energy, etc.), soil health and farm sustainability;
- The industry needs to provide input into periodic strategic reviews of various programs such as:
 - Forage crop insurance;
 - Improvements in crown lands management;
 - Climate change initiatives;
 - Quantifying the benefits of maintaining grasslands;
 - Innovative uses (e.g. biomass energy, nutraceuticals, etc.) of forage and crop residues; and
 - Support for Ecological Goods and Services programs;
- MFC's role could be to:
 - Continue to develop and enhance partnerships with other organizations that have similar mandates to incorporate forages/grasslands into their programs;
 - Act as the umbrella organization to the Manitoba forage and grassland industry and identify the needs of producers and other stakeholder groups to:
 - Advise the provincial agriculture minister and executives and federal MPs on a regular basis regarding the forage and grassland industry's position on current issues;
 - Initiate support for studies of provincial issues that affect the forage/grassland industry including transportation and regulatory policies, research priorities, etc.;
 - Represent the forage and grassland industry at provincial and national meetings regarding water stewardship, climate change, etc.;

- Work closely with MAFRI staff to assist with the development of research and extension plans that include a sustainable model for the Manitoba Forage Council and an effective extension service;
- Provide leadership in good governance practices (e.g. board and committee structure, responsibilities and functionality) and develop board governance practices that ensures that directors are fully engaged and that the forage/grassland industry's concerns are promoted;
- For the Manitoba Forage Council (MFC) to provide leadership to the forage/grassland industry it needs to be predictably and adequately funded, which could include a combination of:
 - Annual memberships and corporate fees (currently occurring);
 - Administrative fees from extension and research projects, etc. (currently occurring);
 - Sell sponsorship opportunities to companies (e.g. “Friends of Forage and Grasslands”) (currently occurring);
 - Levies or check-off programs (not currently occurring and unlikely to be acceptable to producers);
 - Partnering with other organizations such as the Manitoba Cattle Producers Association, Dairy Farmers of Manitoba and the Manitoba Sheep Producers Association;
 - Develop a Manitoba Forage & Grassland Trust Fund to accept donations and bequests from individuals, corporations and other sources. Annual interest earned in the fund would be used for administration and projects and ;
 - Collaboration between the Manitoba Forage Council and Manitoba Agriculture, Food and Rural Initiatives to develop a long term agreement that may include financial support to MFC as well as closer linkages and coordination between MFC and MAFRI.

4. Improve market opportunities through improved logistics and infrastructure, particularly to move hay to export markets and to process livestock locally for niche markets.

To improve market opportunities for Manitoba's forage and grassland industry the industry should:

- Work with ruminant livestock producers to support establishment of local processing to supply niche markets;
- Continue to build on the forage marketing potential of the Manitoba forage industry by identifying new markets that Manitoba producers and exporters can feasibly supply on an ongoing basis, especially local markets for high quality forage (e.g. dairy, equine, forage finished beef/lamb) and emerging export markets. Also consistent local markets are needed for lower quality forage and crop residues;

- Initiate a study by the University of Manitoba Transport Institute to compare costs in the Canadian hay supply chain compared to the costs in competitors' (e.g. U.S.) supply chains and to identify opportunities to harmonize freight policies with the U.S.; address differences in infrastructure between Canada and competitive exporting countries; identify additional infrastructure that Canada needs to enable it to be a leader in supplying forage to international markets;
- Work with Federal and Provincial Governments and the forage marketing sector (forage exporters) to develop programs that promote the development of export markets for Manitoba forage production;
- Continue to work with the Churchill Gateway Development Corporation to develop opportunities to use the port of Churchill for hay exports;
- Partner with other agricultural groups such as the Canadian Special Crops Association to present a united front and to use a proactive approach to advance the industry's concerns to legislators and regulators (particularly in rail); and
- Establish stronger partnerships with Export Development Canada, government officials (e.g. Canadian trade officers and consulate officials) and selected private sector leaders to ensure that systems are in place that guard against non payment for forage exports;
- Create relationships and/or partnerships with some of the key government policy makers in importing countries to provide market intelligence and to ensure that our industry keeps apprised of possible future changes to policy (e.g. environmental issues, etc.); and
- Encourage producers who wish to pursue export markets to convert to production of small or larger square bales. These are more efficient to transport than large round bales and are more acceptable to buyers. There is also an opportunity to work with producers to investigate different forms of densified product.

5. Improve the image of agriculture in general and forage/grassland production in particular.

To improve the image of agriculture in general, and forage/grassland production in particular, the industry should:

- Work with mass media to allow for the discussion of current farm and rural issues in the main stream media (e.g. such as the column in the Free Press by Laura Rance). Also to have a team of technical experts who could respond quickly to misinformation on current issues including those related to health issue or the environment;
- Develop school information packages for use by teachers on various forage/livestock issues and ensure consistent delivery among all teachers. Need to have good PowerPoint slide sets and/or video that teachers could use in their class sessions and also a listing of producers who would be willing to volunteer their time to make accurate presentations to the classes. This could include the development of a DVD

that is pre-recorded either as a presentation or something more hands-on (similar to information pieces the Canola Council has put out and uses in schools and other venues).

Implementation

To ensure that the strategic initiatives that were identified in this Strategic Plan will be implemented in a timely manner, the Manitoba Forage and Grassland Industry Stakeholder Committee (and a smaller subgroup thereof) developed an Implementation Plan that prioritized and assigned timelines to the Strategic Tactics presented in this Section. Following the development of the draft Implementation Plan the Manitoba Forage Council felt that there was a need to develop a Plan of Action after further consultations with representatives of the main partner groups. This Plan of Action addresses each of Tactics and indicates on-going activity along with specific plans for implementation. The subgroup agreed to remain involved for a period of up to a year (or even longer) overseeing the implementation of the Strategic Tactics.

1.0 Introduction

During the preparation of the Manitoba Forage and Grassland Industry Strategic Plan the Kelwin Management Consulting team conducted interviews with a range of industry stakeholders and identified many of the Manitoba forage and grassland industry's Trends, Challenges, Opportunities and Tactics that are shown in the following sections of this document. This initial research was not intended to be an exhaustive listing of all relevant trends, challenges, opportunities and tactics – rather it was designed to ensure that participants at the Manitoba Forage and Grassland Strategic Workshop that was held on April 8, 2009, were provided with relevant background information to help them to become fully engaged in discussions that occurred.

This information, which is included in Appendix 1 was summarized and distributed to forage producers and other participants that attended the Forage and Grassland Strategic Workshop.

This Manitoba Forage and Grassland Industry Strategic Plan document combines the results of the consulting team's research, the insights developed from the Forage and Grassland Strategic Workshop and from subsequent discussions with the Stakeholders Group and other industry participants.

2.0 Forage and Grassland Industry Trends (Globally and in Manitoba) and Manitoba Forage Industry Profile Update Information

This section highlights some of the major trends that have affected the global and Manitoba forage and grassland industry. It also includes the updated Manitoba Forage Industry Profile information that was presented by Manitoba Agricultural Food and Rural Initiatives (MAFRI) at the Manitoba Forage and Grassland Strategic Workshop on April 8, 2009.

2.1 Forage and Grassland Industry Trends

A number of trends, both positive and negative, have been impacting the Manitoba forage and grassland industry. Some of the most important trends are noted below.

2.1.1. Manitoba Forage and Grassland Industry Trends

The trends that have been primarily affecting the Manitoba forage and grassland industry included:

1. Increased operating costs of forage production including transportation, fertilizer and other costs;
2. Increased Manitoba weather-related problems including too much moisture, too little moisture, increased winterkill, etc.;
3. Prolonged economic pressures on the livestock industry (poor cattle prices caused by BSE and other factors, high grain prices, etc.) have caused many producers to reduce the size of their cattle herds (and forage/pasture acres), drain wetlands, etc. in hopes of improving their overall farm's profitability;
4. Increased consumer interest in niche products/markets (e.g. forage-finished, organic, natural, etc.), is allowing some producers to continue or expand their operations raising cattle, bison, elk, sheep and goats in this way.
5. Decreased hay exports to Asian markets;
6. Increased potential hay export opportunities to traditional (e.g. U.S. dairy states) and nontraditional (e.g. Middle East, Mexico, California, Florida) markets due to increased weather-related problems (especially prolonged drought) and/or restricted access to irrigation water for forage crops in those areas;
7. Increased levels of education among younger farmers (e.g. agricultural degrees or diplomas) are raising the level of acceptance and adoption of new technologies to improve financial and agronomic management practices;
8. Increased use of technology to lower hay production and grazing costs (e.g. rotational and extended grazing systems; swath and bale grazing; round bale silage; hay preservatives; large square balers; etc.) has offset some of the negative impacts of weather, economic pressures, etc.; and
9. Manitoba's livestock population trends have had a major impact on the potential for local forage usage.

The recent trends are shown in the table below.

Manitoba Ruminant Livestock Inventories 2001 to 2008 – Thousands of Head

	2001	2002	2003	2004	2005	2006	2007	2008
MB Beef Cattle - July 1 ⁹	1,344	1,389	1,507	1,637	1,645	1,596	1,453	1,448
MB Dairy Cows and Replacement Heifers - July 1 ¹⁰			42 21	42 23	44 24	44 20	45 21	46 21
Sheep and Lambs - July 1 ¹¹	84	78	82	82	78	69	70	66
Bison ¹²						20		
Horses ¹³	63					47		

Manitoba Beef Cattle Statistics 2001 to 2008 – Thousands of Head

	2001	2002	2003	2004	2005R	2006R	2007R	2008P
NO. OF BEEF CATTLE FARMS:	10,800	10,755	10,585	10,905	10,530	9,850	9,200	9,000
(farms, 51+% of income from beef cattle):	7,232	6,825	6,175	6,020	7,015	6,925	5,860	5,000
% of farms that achieve 51+% of income from beef cattle	67%	63%	58%	55%	67%	70%	64%	56%
BEEF CATTLE JULY 1 ('000):								
Beef cows	566.0	574.0	622.0	650.0	676.0	680.0	612.0	601.0
<i>% of Canada</i>	11.8	11.9	12.6	12.2	12.4	13.2	12.0	12.4
Bulls	26.2	26.3	30.4	32.4	32.4	31.5	27.8	28.3
Beef replacement heifers	84.0	92.0	100.0	96.0	95.0	80.0	72.0	78.0
Beef slaughter heifers	61.8	73.7	91.6	106.5	107.9	89.3	105.0	73.7
Steers	103.6	110.4	121.7	152.3	108.5	98.3	93.3	88.8
Calves under one year	502.8	512.3	541.2	599.9	624.9	616.9	543.3	558.5
Total beef cattle	1,344.4	1,388.7	1,506.9	1,637.1	1,644.7	1,596.0	1,453.4	1,428.3
<i>% of Canada</i>	10.2	10.5	11.2	11.4	11.2	11.5	10.5	10.8

The percentage of Manitoba's beef cattle farms that have achieved 51+% of their income from beef cattle have ranged from as low as 55% in 2004 to 70% in 2006. In 2008 it was projected to have been 56%.

The average number of beef cows per farm has increased from 52 in 2001 to an estimated 67 beef cows per farm in 2008.

⁹ Manitoba Cattle and Beef Industry 2008, Janet Honey, prepared for the Department of Agribusiness and Agricultural Economics, University of Manitoba, March 2009.

¹⁰ Manitoba Statistical Yearbook 2008, Manitoba Agriculture, Food and Rural Development.

¹¹ Manitoba Statistics Factsheet, Livestock on Farms, 2006-2007.

¹¹ Manitoba Cattle and Beef Industry 2008, Janet Honey, prepared for the Department of Agribusiness and Agricultural Economics, University of Manitoba, March 2009.

¹² Kelly Firmage-O'Brien, Statistics Canada – Bison on the comeback trail, 96-325-X, Agriculture at a Glance, 2009-04-09.

¹³ Statistics Canada website: <http://www.statcan.gc.ca/pub/95-632-x/2007000/t/4129740-eng.htm#46>.

Manitoba's beef cow herd:

- Increased by 20% from 2001 to a record high of 0.68 million head in 2006 because of the American border closure to Canadian cattle in May 2003 due to BSE found in a Canadian cow;
- Decreased by 10% in 2007 following the opening of the American border to cattle under 30 months of age in July 2005;
- Decreased by 2% in 2008 and
- Is the third largest beef cow herd in Canada, with 12.4% of Canada's total, after Alberta and Saskatchewan.

Manitoba's beef industry is dominated by cow calf producers. The industry holds the potential to use more feed inputs of all types if more animals were fed to slaughter weight in Manitoba. For example, in 2008 the Manitoba beef industry used about \$200 million of feed; if all the calves in Manitoba were fed to slaughter weight instead of being exported as calves, stockers or feeders then the value of feed consumed annually would exceed \$400 million.¹⁴

Horse numbers have declined with the scaling back of the equine ranching industry while dairy cattle have increased somewhat and sheep numbers have decreased somewhat.

2.1.2. Global Forage and Grassland Industry Trends

In addition to the trends shown above, a number of trends can be noted on a global scale, including:

1. World population growth and increased income levels in developing countries has increased demand for human food, livestock production and animal feed;
2. Increased levels of international trade and investment;
3. Increased attention and interest in functional foods and nutraceuticals;
4. Increased attention and demand for sustainable agriculture practices worldwide, especially increased concern about soil health and increased recognition of the beneficial role that forages can play in improving the sustainability of crop rotations and farm practices;
5. Increased interest in biomass as a source of renewable energy (e.g. switchgrass, rapidly growing poplar/willow varieties and crop residues);¹⁵
6. Decreased emphasis on forage and livestock research funding over the last decade (especially funded by the public sector);
7. Decreased number of new forage varieties; and

¹⁴ Manitoba Cattle and Beef Industry 2008, Janet Honey, prepared for the Department of Agribusiness and Agricultural Economics, University of Manitoba, March 2009.

¹⁵ Biomass energy, or bioenergy, refers to all forms of renewable energy that are derived from plant materials produced by photosynthesis. Biomass fuels can be derived from wood, agricultural crops and other organic residues. These fuels can be obtained from many sources in Canada, including sawmills, woodworking shops, forest operations and farms. Source: Manitoba Science, Technology, Energy and Mines website (<http://www.gov.mb.ca/stem/energy/initiatives/biomass.html>).

8. Increased interest in recognizing the economic value of environmental benefits resulting from sustainable agricultural practices.

2.2 Highlights of the Revised Manitoba Forage Industry Profile

This section summarizes the Forage Profile Update information that was presented by Manitoba Agriculture, Food and Rural Initiatives (MAFRI) at the Manitoba Forage and Grassland Strategic Workshop. Highlights of the Revised Manitoba Forage Industry Profile are provided, including the change from the 2001 version of the Profile.

All the tables that are referred to in this section are shown in Appendix 4 of this document.

Table 1 shows that from 2001 to 2006, the total number of Manitoba farms decreased by 9.6%. Other important trends noted include the following about the number of Manitoba farms reporting:

- The number of farms reporting alfalfa production decreased 8.6%;
- The number of farms reporting other tame hay production increased 6.8%;
- The number of farms reporting forage seed production decreased 11.0%;
- The number of farms reporting improved pasture decreased 2.7%; and
- The number of farms reporting native pasture decreased 11.8%.

Table 2 shows that from 2001 to 2006, Manitoba's total land remained unchanged and its farmland increased 1.5% while:

- Improved acreage decreased 0.5%;
- Crop acreage decreased 0.3%;
- Summerfallow decreased 50.5%;
- Improved pasture increased 30.0%;
- Unimproved pasture/hayland decreased 2.0%; and
- All other land increased 26.5%.

Table 3 shows that from 2001 to 2008, Manitoba's tame hay seeded acreage increased each year from 2002 through 2007 and decreased somewhat in 2008. From 2001 to 2008 the acreage increased 13.0% from 2.17 million acres to 2.45 million acres.

Manitoba's harvested tame hay area increased each year except for 2002 and 2008.

Table 4 shows that Manitoba's tame hay yields decreased from 2001 to 2003 from 1.6 tons per acre to 1.1 tons per acre. Yields increased to 1.7 tons per acre in 2004 and 2005, dropped to 1.6 for 2006 and 2007 and increased to 1.8 tons per acre in 2008.

Table 5 shows that Manitoba's share of the total Canadian tame hay production decreased from 2001 (over 16% of the national total) to 2003 (less than 10% of the national total), following a trend that was similar to Manitoba's average tame hay yield. Manitoba's share increased in 2004 to above 12%, but has averaged between 11% and 12% from 2005 to 2008.

Table 6 shows that Manitoba's tame hay prices increased from 2001 (between \$50 and \$55 per ton) to range between \$65 and \$70 per ton during 2002 through 2006. In 2007 the price decreased from \$70/ton to approximately \$60/ton before recovering in 2008 to above \$70.

Table 7 shows that the value of Manitoba's tame hay production decreased from 2001 (\$187.8 million on a volume of 3.5 million tons of production) to approximately \$160 million on 2.4 million and 2.5 million tons of production, respectively in 2002 and 2003. Values then increased to range between \$240 million to \$270 per ton during 2004 through 2008 on volumes of 3.8 to 4.0 million tons of production.

The value of forage seed production increased by a factor of approximately 2.5 times from approximately \$13.5 million in 2001 to \$33.7 million in 2006 and has continued at approximately the 2006 level throughout 2007 and 2008.

Table 8 shows that Manitoba's largest value forage seed crops have consistently been alfalfa, perennial ryegrass and timothy. However, the trends between these crops have been significantly different.

The value of Manitoba's alfalfa seed production has ranged from less than \$5 million to more than \$8 million dollars per year, but has not consistently increased or decreased.

The value of Manitoba's timothy seed production was consistently in the range of \$2.5 to 4 million dollars annually from 2001 through 2006. However in 2007 the value of timothy seed production increased to over \$4 million. The value of timothy seed production was almost equal to the value of alfalfa seed production in 2008 at over \$5 million.

However, most of Manitoba's forage seed success has occurred with perennial ryegrass seed. Its value has increased from \$3 million in 2001 to nearly \$18 million in 2008.

Table 9 shows that the value of tame hay and processed alfalfa exports increased from approximately \$12 million in 2001 to approximately \$18 million in 2002. In 2002 alfalfa pellets accounted for slightly more than half the total value of exports. However, during 2003 to 2007 processed alfalfa products decreased to nearly zero and tame hay exports decreased to range between \$5 million and \$8 million annually.

In 2007, the value of tame hay exports was approximately 21% less than the value of tame hay and processed alfalfa products had been in 2001 (in the \$9 million range versus \$12 million). However, because of the change in the product mix, it is difficult to estimate the impacts on the volumes exported. It is also difficult to collect reliable export data on hay being shipped to the US market. Industry participants estimate that 10-20,000 tonnes per year of hay and straw exports are excluded from the data collection because producers/exporters declare a low value on the shipments.¹⁶ Some participants believe the total export volumes of hay and straw are many times higher than (perhaps as much as triple) the recorded volumes.

¹⁶ Shipments with a declared value of less than \$2,000 are not recorded as exports at the US border.

The value of forage seed exports was consistently in the range of \$30 to \$40 million from 2001 through 2005 before increasing to over \$45 million in 2006 and over \$55 million in 2007.

Table 10 shows that Manitoba's farm cash receipts (11% of the Canadian total) for hay/clover and forage/grass seed are less than all other provinces except British Columbia and the Atlantic Provinces. The dominant forage producers are Alberta (32% of total Canadian cash receipts), Ontario (21%), Saskatchewan (15%) and Quebec (14%).

3.0 Manitoba Forage and Grassland Industry Challenges

This section summarizes the Key Challenges that were identified from the research¹⁷ and during the Manitoba Forage and Grassland Industry Strategic Planning Workshop. Many of the Trends noted in Section 2.1 have created challenges for the forage industry. Several of these trends have decreased the potential size and vitality of the forage production and grassland industry.

The Key Challenges have been grouped into relevant categories to facilitate the process of identifying strategies that the Manitoba Forage and Grassland Industry can develop and implement to overcome these Challenges and capture the Opportunities that are identified in the following section. The categories that were used for grouping the Challenges include:

1. Research Challenges;
2. Extension Challenges
3. Agronomic and Farm Management Challenges;
4. Marketing Challenges;
5. Policy-Related Challenges.
6. Transportation, Infrastructure and Logistics Challenges; and
7. Education Challenges.

The Key Challenges are shown below within each of these six categories.

1. Research Challenges:

- Researchers have been discouraged from using the most modern breeding technologies (e.g. genetic modification techniques) to breed better forage varieties (with potentially higher yield and quality);
- There is a lack of sound research and development (R&D), especially into varietal improvement and regional adaptation;
- There is a lack of good technical knowledge to substantiate claimed benefits including health, environmental goods and services and economic benefits; and
- There is a perception that research is typically financially supported by private organizations, which leads to suspicion that it is less objectively done and reported.

2. Extension Challenges

- It is challenging to effectively promote improved grazing concepts because intensive grazing requires high levels of planning and management – it is easy for producers to continue to use status quo practices;
- There is a need to promote benefits of forage production to grain producers (environmental, nitrogen fixation, etc.) because there is low awareness among potential forage producers of the benefits of forage production; and

¹⁷ This information was summarized in the Pre-Workshop Reading Materials that were provided to participants prior to the Manitoba Forage and Grassland Industry Strategic Planning Workshop.

- It has been challenging for extension personnel to keep pace with modern needs. Farmers (especially young, well educated farmers) have many more sources of agronomic, market and financial management information available to them than was the case in the past. The range of organizations carrying out extension activities has expanded and now includes MAFRI; Ducks Unlimited; Agri-Food Canada-Agri-Environmental Services Branch (formerly PFRA) and other conservation organizations; and some university professors.

3. Agronomic and Farm Management Challenges:

- Increased operating costs including transportation, fertilizer and other costs reduced potential net financial returns from forage production;
- Increased weather-related problems including too much moisture, too little moisture, increased winterkill, etc. reduced potential net financial returns by decreasing both the quantity and quality of forage production;
- Increased economic pressures on livestock production (prolonged periods of poor cattle prices, recent higher grain prices, etc.) have reduced the profitability of livestock production and reduced forage and grassland acreage; and
- It is difficult to convince producers of the benefits of trading land with neighbours (to encourage the rotation of grain land into forage);
- Forage insurance programs need to be improved to encourage producers of high quality forage to enroll (current programs don't reflect the quality and type of forage produced); and
- Production of high quality forage requires a large investment in equipment and storage, but inconsistent profitability has made this difficult to justify.

4. Marketing Challenges:

- While there is virtually always strong demand for high quality alfalfa and timothy hay into the Middle East and US markets (and until recently into Asian markets), there are limited markets for medium and low quality forage;
- There is a lack of consistent market development of new export hay markets for Manitoba hay because:
 - Producers have to rely on hay marketers because the producers often lack time, money and expertise to pursue markets themselves;
 - Financing needed to support marketing has sometimes been difficult to obtain;
 - There has been a lack of government funding programs available to producers and producer organizations to support processing and market development; and
 - There has been a lack of market information and “price discovery” information being reported to Manitoba forage producers from potential markets/marketers. This has created a lack of trust between forage producers, marketers and buyers.

5. Policy-Related Challenges

- Government programs and regulations are often difficult to comply with (e.g. crop insurance and freight assistance programs for forage and livestock producers);
- Policies are often driven by public opinion and are not based on science (e.g. restrictions on hog farm expansions and manure application). As the number of farmers decreases their political influence does as well;
- Funding is too often short-term (e.g. government funding of research and producer organization-initiated market development initiatives);
- Producers and industry representatives need to invest significant time in order to change policies;
- The forage industry lacks a national forage industry organization to speak for all provinces/regions on policy issues;
- The owners and lessees of crown lands (i.e. government and/or producers) have made limited investment in improvements to fencing, facilities, etc. to improve the grazing capacity and forage quality of the 1.5 million acres of provincial crown lands. It has been estimated that the grazing and forage production capacity of these lands could be doubled from 65,000 beef cows annually to 130,000 beef cows with improved management; and
- There is a lack of forage/livestock coverage from Business Risk Management (BRM) programming (provincial: MASC; federal: Agri Stability, etc.).

6. Transportation, Infrastructure and Logistics Challenges:

- A lack of federally approved abattoir and processing facility has made it difficult for producers to supply products for niche markets (e.g. forage finished, natural and organic livestock and poultry, etc.);
- Increase fuel costs have increased production and transportation costs, especially for export shipments to distant markets;
- The potential development of small scale biomass power projects has been hindered by Manitoba's centralized energy production and distribution systems (e.g. large hydro-electric stations and extensive power distribution networks that sell electricity at low prices) and a lack of "friendly" incentives and regulations for "green" power;
- Hay exporters' ability to economically and efficiently ship hay to export markets using shipping containers has been hampered because the owners of shipping containers and the railways are hesitant to move containers to inland locations unless they can be guaranteed steady, predictable volumes. Exporters are unable to predict future levels of export-quality forage production and export sales sufficiently early to order a pre-determined number of containers months in advance to ensure that they will have them available when needed for shipment via Vancouver and Montreal to export destinations; and
- There may be a lack of forage processing infrastructure in Manitoba.

7. Education Challenges

- The general public lacks knowledge about agriculture in general and forage/livestock production in particular. Thus, public opinion is not supportive of agriculture in general and forage/livestock production in particular – the public needs to be shown the value of initiatives such as Ecological Goods and Services (EG&S and its predecessor, ALUS);
- Continued efforts are needed by the marketers of niche meat products (e.g. forage-finished beef and natural lamb, bison, etc.) to promote the potential health benefits of their products (e.g. higher CLA levels present in grass-fed beef) because there is a lack of public awareness about the health benefits of meat generally and niche products in particular.

4.0 Manitoba Forage and Grassland Industry Opportunities

This section summarizes the Opportunities that were identified from the research¹⁸ and during the Manitoba Forage and Grassland Industry Strategic Planning Workshop. Many of these Opportunities are closely aligned with the Trends that were identified in Section 2.1 and the Challenges that were identified Section 3.0. Several of these Opportunities benefit from the Trends and are the “flipside” of the Challenges that were identified.

The Key Opportunities have been grouped into relevant categories to facilitate the process of identifying strategies that the Manitoba Forage and Grassland Industry can develop. The categories that were used for grouping the Opportunities include:

1. Research Opportunities;
2. Extension Opportunities;
3. Agronomic and Farm Management Opportunities;
4. Marketing Opportunities;
5. Policy-Related Opportunities.
6. Transportation, Infrastructure and Logistics Opportunities; and
7. Education Opportunities

The Key Opportunities are shown below within each of these six categories.

1. Research Opportunities:

- Conduct research to improve forage production, and preservation/utilization including:
 - New crops, new crop varieties and new technologies (e.g. GMO, non-bloating alfalfa, better drought tolerance and winter hardiness);
 - Investigate synergies between forages and other crops;
 - Intercropping advantages;
 - Investigate the possible reduced E. coli risk of forage finished livestock compared to grain finished livestock; and
 - Airtight bale processing (e.g. vacuum wrap) and biodegradable wrapping material;
 - Use of “weeds” as forage in emergencies;
 - Use of higher levels of forage in complete rations;
- Conduct research into alternative uses of forage, grasses and crop residues, including:
 - Use of biomass (including forage crop residues) for combined heat and power and erosion control;
 - Use of biomass crops (including willow and poplar) in wetlands to remove nutrients including phosphorus, nitrogen and other nutrients;

¹⁸ This information was summarized in the Pre-Workshop Reading Materials that were provided to participants prior to the Manitoba Forage and Grassland Industry Strategic Planning Workshop.

- Investigate opportunities in silviculture, particularly the co-habitation and harvesting of forage and woody species;
- Form interdisciplinary collaboration groups including Agriculture and Agri-Food Canada; University of Manitoba (e.g. Human Nutrition, Agricultural and Food Sciences); Richardson Centre for Functional Foods and Nutraceuticals; Manitoba Agriculture, Food and Rural Initiatives and others to research:
 - Carbon sequestration effects of forages including life cycle carbon sequestration analysis;
 - Role of forages in mitigating Phosphorus and Nitrogen problems;
 - Potential impact of carbon credits;
 - Increase of Phosphorus uptake using inoculants; and
- Utilize research groups to access funding resources.

2. Extension Opportunities:

- Educate producers regarding:
 - The potential health benefits of feeding higher levels of forage in livestock finishing diets;
 - Manitoba's clean air/water benefits of forage (Omega-3, CLA for meat, eggs, milk/cheese, etc.);
- Educate producers using extension services and personnel regarding better management techniques (forage and livestock production and environmental benefits). This would include extension and education delivered by MAFRI as well as by conservation organizations, Agri-Food Canada-Agri-Environmental Services Branch (formerly PFRA), Ducks Unlimited, industry sources, mass media, etc. using tours; meetings; grazing, forage and/or livestock clubs; as well as remote interactive video delivery systems that are available in most areas of the province. Extension topics would include:
 - Best Management Practices for stewardship of their land and water resources – while the vast majority of livestock producers are excellent, there is an ongoing need to educate some producers to use better stewardship practices. It may be beneficial to set an objective for the Manitoba forage and grassland industry to increase forage productivity by 10% and quality (i.e. feed quality) by 10% within ten years in order to increase producers' profitability;
 - Application of research findings and technology developments that will improve their commercial forage/livestock operations;
 - Green manure benefits (improved soil tilth and fertility, erosion control, etc.);
 - Improved human resource management skills;
 - Ecological Goods and Services (i.e. "carbon sink") concepts;
 - Sustainable management practices;

- Advantages of finishing more cattle in Manitoba using protocols that best utilize the producers' resources and also meet consumers' demands for conventional; natural; organic; and grass finished cattle/bison/elk/sheep. Inclusion of more forages holds the potential to:
 - Lower total energy inputs;
 - Stabilize topsoil;
 - Use perennial crops; and
 - Improve water management.
- Encourage expansion of part-time forage/beef operation, especially those that purchase hay from other producers.

3. Agronomic and Farm Management Opportunities:

- Young farmers who have higher levels of education (e.g. agricultural degrees or diplomas) are more receptive to adopting new techniques and technologies to improve financial and agronomic management practices, including:
 - Improve haying and grazing management including round bale silage, preservatives, large square balers, swath grazing to extend life of legumes in pastures, etc.;
 - Use more legume forages to reduce requirement for inputs (especially nitrogen fertilizer);
 - Improve quality of forage produced (too much poor quality being produced); and
 - Expand use of perennial ryegrass and annual forages to extend grazing period (this could be enhanced by the availability of better forage varieties of perennial ryegrass);
- Expand programs such as Ecological Goods and Services (EG&S and its predecessor, ALUS) and manage to capture "full" sustainability benefits including:
 - Incorporation of Bio-char into soil;
 - Inclusion of forages in crop rotations, especially for grain farmers;
 - Use intercropping and multi-species cover crops to increase production;
 - Using forages to improve soils (e.g. to break through hardpan);
 - Use forages and grasses for phyto-remediation;
 - Further develop carbon sequestration on native pasture;
 - Manage rotational grazing for best results;
 - Improve winter site management;
 - Make better use of native grass varieties for grazing and hay production;
 - Improve forage management (e.g. critical rest period, stocking rates, rotational grazing, multiple forage species, etc.) especially on native grasses ;
- Improve soil health and environmental benefits including:
 - Stop encroachment of invasive species (e.g. spurge, aspen, willow);

- Improve management of Manitoba Crown Lands (increased carrying capacity and greenhouse gas (GHG) mitigation/management);
- Encourage equipment sharing among producers;
- Encourage land trading between livestock producers and grain producers (similar to potato growers) to get more cropland into forage rotations;
- Improve productivity of marginal grasslands, including native grasslands and Crown Lands;
- Encourage expansion of part-time forage/beef operation, especially those that purchase hay from other producers; and
- Use hay crop residues for biomass (heat).

4. Marketing Opportunities:

- Develop domestic and export markets for premium quality hay and alternative uses for lower quality hay and forage byproducts (using a Value Chain approach) including:
 - Build domestic dairy market for alfalfa, horse hay market for grass hay;
 - Connect buyers and sellers to build relationships;
 - Market smaller packages (e.g. compressed small bales) to high value markets;
 - Increase hay exports to traditional (e.g. U.S. dairy states) because of increased livestock numbers and nontraditional (e.g. Middle East, Asia, Mexico, California, Florida) markets because of weather-related problems (e.g. persistent drought) and/or irrigation restrictions in the potential hay importing regions;
 - Develop organic and international hay markets (including export/import protocols, processing capacity, and local production);
 - Develop human consumption uses of forage (nutraceutical/bioactives) and explore potential pet food uses;
 - Develop “green” building products using forages including:
 - Insulation;
 - Structural building materials;
 - Composites (possibly a combination of new and recycled material);
 - Clothing;
- Use forage to transfer nutrients (especially Phosphorus) from areas of excess to areas of shortage; and
- Create improved returns for cattle producers, which would create more demand for forages, by establishing successful local slaughter plants that would have a positive impact on the economics of raising and finishing cattle in Manitoba. If these plants were able to handle multiple species that would also have positive impacts for sheep/bison/elk profitability and, in turn, for forage demand.

5. Opportunities to Influence Policies:

- The Manitoba Forage and Grassland Industry has the potential to work with like-minded groups including other provincial/regional forage associations; Manitoba Cattle Producers Association; Manitoba Cattle Enhancement Council; Keystone Agricultural Producers; and others, to influence policy development. Some of the Opportunities for improved policies include:
 - Improve compensation for wildlife damage to hay supplies and standing grass;
 - Increase/support grazing clubs and include grain producers;
 - Integrated pest management involving all affected parties (RMs, railways and landowners);
 - Improve regulations – encourage the use of more “carrot” and less “stick”;
 - Improve extension efforts to promote improved grazing and forage utilization techniques and to improve cattle/bison/elk/sheep profitability through establishment of additional Manitoba processing facilities (e.g. regional slaughter plants);
 - Encourage policies that promote innovation;
 - Forages’ role in sustaining small family farms including livestock;
 - Improve financial encouragement and support to farmers for Ecological Goods and Services (EG&S) programs;
 - Ensure that the transition from one program to another is smooth with no lag time between (e.g. CAIS, APF, Growing Forward);
 - Form a national organization that could influence policy development at the national level;
 - Persuade the provincial government (i.e. MAFRI) to provide basic operating funding and/or staff support for the Manitoba Forage Council; and
 - Form a charitable foundation that would provide funding for forage research and other initiatives to promote the Manitoba forage and grassland industry.

6. Transportation, Infrastructure and Logistics Opportunities:

- Reduce transportation costs through increased efficiency, improved transportation and infrastructure, including:
 - Encourage foreign investment in Manitoba’s forage processing industry. Foreign companies located in large export markets are interested in investing in the Manitoba industry to ensure their future forage supplies – they have invested in other forage production industries; and
 - Work with the Transport Institute to develop systems that will encourage companies and railways to move containers to inland locations for transport of forages via Vancouver and Montreal to export destinations. This needs to dovetail with production of steady, adequate volumes of high quality hay and penetration of export markets.

7. Education Opportunities:

- Educate the public regarding:
 - The potential health benefits of feeding higher levels of forage in livestock finishing diets;
 - Manitoba's clean air/water benefits of forage (Omega-3, CLA for meat, eggs, milk/cheese, etc.);
- Educate the general public (especially youth) and policy makers by working with industry partners (e.g. Agriculture in the Classroom, 4-H and universities to reach youth) regarding:
 - Forages role in improving soil health and in improving the sustainability of crop rotations and farm practices; and
 - The need for research to quantify and optimize the benefits that forages and grasses can provide.
- Cultivate relationships with urban media to help promote/disseminate information relevant to this industry (health benefits of beef, emphasis on Manitoba grown products, etc.).

5.0 Manitoba Forage and Grassland Industry Strategic Tactics

This section summarizes the Strategic Solutions (i.e. Strategic Tactics) that were identified from the research¹⁹ and during the Manitoba Forage and Grassland Industry Strategic Planning Workshop. Many of these Strategic Solutions are designed to overcome the Challenges (shown in Section 3) and to capture the Opportunities (shown in Section 4) and are closely aligned with the Trends that were identified in Section 2.

This section examines the Forage and Grassland Industry's Strategic Solutions/Tactics from a tactical and implementation perspective. The Key Strategic Solutions have been grouped into five strategic categories for implementation, which include all seven of the categories of opportunities and challenges that were shown in the previous sections. A more detailed listing of the Opportunities/Tactics that were identified at the Strategic Workshop is included in Appendix 5.

The groupings that have been used in this section include:

1. Ensure that research addresses the Manitoba forage and grassland industry's needs;
2. Enhance extension services to improve forage producers' agronomic and farm management/marketing practices;
3. Enhance the capacity of the Manitoba forage and grassland industry to develop leadership and sustainability strategies;
4. Improve market opportunities through improved logistics and infrastructure; and
5. Improve the image of agriculture and forage/grassland production.

The Key Strategic Solutions are shown below within each of these five categories.

1. Ensure that research addresses the Manitoba forage and grassland industry's needs.

To ensure that research addresses the needs of the Manitoba forage and grassland industry the industry needs to:

- Collaborate with representatives from MFC, MCPA, U of M and AAFC to coordinate forage/grassland research in Manitoba (i.e. to set research priorities, develop research initiatives and assist in securing funding for implementation) This working group would include:
 - Forage/livestock producers;
 - Industry representatives;
 - Researchers; and
 - Government;
- Initiate the development of a National Centre of Excellence for Forage and Grassland Development and a Manitoba Forage and Grassland Foundation to initiate and support research and technology transfer that:

¹⁹ This information was summarized in the Pre-Workshop Reading Materials that were provided to participants prior to the Manitoba Forage and Grassland Industry Strategic Planning Workshop.

- Is based on successful models adopted in other regions;
- Solicit participation from government, industry and producer groups;
- Seek out funding sources including foundations etc. and/or create a forage and grassland foundation.
- Work with researcher scientists to identify and seek funding for projects that address Manitoba issues (e.g. forage adaptation trials); and
- Encourage the development of more systems-based approaches to research (e.g. the Marchand/La Broquerie Forage/Cattle/Hog Manure project by the University of Manitoba where many disciplines are involved in the research.

2. Enhance extension services to improve forage producers' agronomic and farm management/marketing practices.

To improve agronomic and farm management practices and marketing opportunities, the Forage and Grassland Industry needs to:

- Prioritize and coordinate extension programs to ensure information is readily available to producers while reducing duplication of efforts. Strategies to accomplish this include:
 - Develop an annual workshop (and/or expand MAFRI's semi-annual horizontal team meetings) to include all relevant extension organizations to share insights regarding the current and future extension priorities to coordinate their activities and to identify collaboration opportunities. This workshop could identify the most effective strategies to inform new and current producers regarding new and more adaptable forage/livestock management practices including: rangeland management practices; grazing practices; stored forage techniques; and riparian and environmental concerns; and
 - Develop a document which summarizes all of the extension efforts that are being conducted by the different agencies (government and non-government) in the province and place this document on the MAFRI, MFC, DU, U of M, AAFC, MCPA and other web sites;
- Ensure that existing and future marketing related extensions initiatives include to:
 - Promote the development of new business opportunities including producer-based value chains and encourage the development of new funding programs to assist value chains with start-up costs;
 - Educate producers regarding the specific needs of exporters and customers in importing countries who want consistent supplies of high quality hay in small or larger square bales; and
 - Establish a workshop/seminar to examine extension gaps (e.g. production protocols and marketing) for forage fed beef production systems; and
- Encourage governments and telecommunications companies to provide high-speed internet service to all areas of Manitoba.

3. Enhance the capacity of the Manitoba forage and grassland industry to develop leadership and sustainability strategies

For the Manitoba forage and grassland industry to be successful it is necessary to have a strong organization to provide leadership and coordination. In the past (and the foreseeable future), the Manitoba Forage Council has served this role. In order to continue to fulfill this role as the primary forage and grassland organization for Manitoba producers and the broader industry the MFC needs to have adequate and sustainable funding. The following points highlight the industry needs and the role of the MFC and potential operational and funding avenues for the organization:

- The industry needs a coordinator and administrator of resources for extension and research projects to gather producer input to improve these projects such as:
 - Grazing School;
 - Grazing Clubs; and
 - Forage Adaptation trials, etc.;
- The industry needs to re-establish priorities (for research, extension, government policy changes) annually and to develop an on-going survey system to determine the current needs and priorities of the industry;
- The industry needs to provide leadership and participate in the development of a Canadian Forage & Grassland Council (CFGAC) to reflect the concerns and issues of Manitoba forage/livestock producers on national and international issues. Once established, the MFC may have an opportunity to provide an administrative support role to this organization;
- The industry needs to promote the multifunctionality benefits of forage and livestock production including those related to Ecological Goods and Services (e.g. greenhouse gas mitigation/ carbon sequestration, biomass energy, etc.), soil health and farm sustainability;
- The industry needs to provide input into periodic strategic reviews of various programs such as:
 - Forage crop insurance;
 - Improvements in crown lands management;
 - Climate change initiatives;
 - Quantifying the benefits of maintaining grasslands;
 - Innovative uses (e.g. biomass energy, nutraceuticals, etc.) of forage and crop residues; and
 - Support for Ecological Goods and Services programs;
- MFC's role could be to:
 - Continue to develop and enhance partnerships with other organizations that have similar mandates to incorporate forages/grasslands into their programs;

- Act as the umbrella organization to the Manitoba forage and grassland industry and identify the needs of producers and other stakeholder groups to:
 - Advise the provincial agriculture minister and executives and federal MPs on a regular basis regarding the forage and grassland industry's position on current issues;
 - Initiate support for studies of provincial issues that affect the forage/grassland industry including transportation and regulatory policies, research priorities, etc.;
 - Represent the forage and grassland industry at provincial and national meetings regarding water stewardship, climate change, etc.;
 - Work closely with MAFRI staff to assist with the development of research and extension plans that include a sustainable model for the Manitoba Forage Council and an effective extension service;
 - Provide leadership in good governance practices (e.g. board and committee structure, responsibilities and functionality) and develop board governance practices that ensures that directors are fully engaged and that the forage/grassland industry's concerns are promoted;
- For the Manitoba Forage Council (MFC) to provide leadership to the forage/grassland industry it needs to be predictably and adequately funded, which could include a combination of:
 - Annual memberships and corporate fees (currently occurring);
 - Administrative fees from extension and research projects, etc. (currently occurring);
 - Sell sponsorship opportunities to companies (e.g. "Friends of Forage and Grasslands") (currently occurring);
 - Levies or check-off programs (not currently occurring and unlikely to be acceptable to producers);
 - Partnering with organizations such as Manitoba Cattle Producers Association, Dairy Farmers of Manitoba; and the Manitoba Sheep Producers Association;
 - Develop a Manitoba Forage & Grassland Trust Fund to accept donations and bequests from individuals, corporations and other sources. Annual interest earned in the fund would be used for administration and projects and;
 - Collaboration between Manitoba Forage Council and Manitoba Agriculture, Food and Rural Initiatives to develop a long term agreement that may include financial support as well as closer linkages and coordination between MFC and MAFRI.

4. Improve market opportunities through improved logistics and infrastructure.

To improve market opportunities for Manitoba's forage and grassland industry the industry should:

- Work with ruminant livestock producers to support establishment of local processing to supply niche markets;
- Continue to build on the forage marketing potential of the Manitoba forage industry by identifying new markets that Canadian producers and exporters can feasibly supply on an ongoing basis, especially local markets for high quality forage (e.g. dairy, equine, forage finished beef/lamb) and emerging export markets. Also consistent local markets are needed for lower quality forage and crop residues;
- Initiate a study by the University of Manitoba Transport Institute to compare costs in the Canadian hay supply chain compared to the costs in competitors' (e.g. U.S.) supply chains and to identify opportunities to harmonize freight policies with the U.S.; address differences in infrastructure between Canada and competitive exporting countries; identify additional infrastructure that Canada needs to enable it to be a leader in supplying forage to international markets;
- Work with Federal and Provincial Governments and the forage marketing sector (forage exporters) to develop programs that promote the development of export markets for Manitoba forage production;
- Continue to work with the Churchill Gateway Development Corporation to develop opportunities to use the port of Churchill for hay exports;
- Partner with other agricultural groups such as the Canadian Special Crops Association to present a united front and to use a proactive approach to advance the industry's concerns to legislators and regulators (particularly in rail); and
- Establish stronger partnerships with Export Development Canada, government officials (e.g. Canadian trade officers and consulate officials) and selected private sector leaders to ensure that systems are in place that guard against non payment for forage exports.
- Create relationships and/or partnerships with key government policy makers in importing countries to provide market intelligence and to ensure that our industry keeps apprised of possible future changes to policy (e.g. environmental issues, etc.); and
- Encourage producers who wish to pursue export markets to convert to production of small or larger square bales. These are more efficient to transport than large round bales and are more acceptable to buyers. There is also an opportunity to work with producers to investigate different forms of densified product.

5. Improve the image of agriculture and forage/grassland production.

To improve the image of agriculture in general, and forage/grassland production in particular, the industry should:

- Work with mass media to allow for the discussion of current farm and rural issues in the main stream media (e.g. such as the column in the Free Press by Laura Rance). Also to have a team of technical experts who could respond quickly to misinformation on current issues including those related to health issue or the environment;
- Develop school information packages for use by teachers on various forage/livestock issues and ensure consistent delivery among all teachers. Need to have good PowerPoint slide sets and/or video that teachers could use in their class sessions and also a listing of producers who would be willing to volunteer their time to make accurate presentations to the classes. This could include the development of a DVD that is pre-recorded either as a presentation or something more hands-on (similar to information pieces the Canola Council has put out and uses in schools and other venues).

Implementation

To ensure that the strategic initiatives that were identified in this Strategic Plan will be implemented in a timely manner, the Manitoba Forage and Grassland Industry Stakeholder Committee (and a smaller subgroup thereof) developed an Implementation Plan that prioritized and assigned timelines to the Strategic Tactics presented in this Section. The subgroup agreed to remain involved for a period of up to a year (or even longer) to oversee the implementation of the Strategic Tactics. This implementation process will be facilitated by various sub-committees that will implement specific strategic initiatives within their area of specialization.

Following the development of this Implementation Plan the Manitoba Forage Council contracted with Wayne Digby of Digby Consulting to meet with various stakeholders and develop a “Plan of Action” in order to involve stakeholders in the development of specific plans and to obtain further “buy in” for the Plan.

This Plan of Action recognizes that new challenges may emerge and the work plan is designed to be fluid enough that it can accommodate some reprioritization or absorbing, addressing and implementing tactical changes that address these challenges.

6.0 Manitoba Forage and Grassland Industry Highest Priority Strategic Tactics

This section of the report provides a listing of the Key Strategic Tactics. The identification of these Key Strategic Tactics is a result of input provided by the Manitoba Forage and Grassland Industry Stakeholder Committee. These Key Strategic Tactics are not listed in order of priority. During the development of this Strategic Plan an attempt was made to involve the Stakeholder Committee in the prioritization of the Key Strategic Tactics. In this prioritization process it became evident that Stakeholder representatives were having a great deal of difficulty ranking the Strategic Tactics. The first four Strategic Tactics were all very close in ranking and therefore should be considered equal. The only strategic initiative that was rated lower on both urgency and importance was the “Improve the Image” initiative – not because it is not important, but because it is less important and urgent than the other four initiatives.

Forage and Grassland Industry Strategic Tactics

The Manitoba Forage and Grassland Industry Should:
1. Ensure that research addresses the Manitoba forage and grassland industry’s needs .
2. Enhance extension efforts by MAFRI, AAFC and other organizations to improve agronomic/farm management and marketing practices .
3. Enhance the capacity of the Manitoba forage and grassland industry to develop leadership and sustainability strategies .
4. Improve market opportunities through improved logistics and infrastructure by working with industry partners to promote multi-party collaborative approaches to find solutions to industries’ logistical challenges.
5. Improve the image of agriculture in general, and the benefits of forage/grassland production in particular, through education .

7.0 Manitoba Forage and Grassland Industry Strategic Tactics Implementation Plan

1. Tactics to ensure that research addresses the Manitoba forage and grassland industry's needs

Tactic	Assignment		Implementation
Description	Potential Lead Organization	Partners	Plan of Action
<p>1. Through collaboration with partners will coordinate forage/grassland research in Manitoba through the formation of a Forage and Ruminant Research Ctte. The mandate of this Forage and Ruminant Research Ctte will be to:</p> <ul style="list-style-type: none"> • Provide input for the setting of research priorities and the development of research initiatives; • Solicit participation from government, industry and producer groups; • Collaborate with research scientists, industry partners, funding agencies and others in identifying and accessing funding. 	<p>Manitoba Forage Council along with MCPA and MAFRI</p>	<ul style="list-style-type: none"> • Manitoba Forage Council • Manitoba Cattle Producers Assoc. (MCPA) • Manitoba Agriculture, Food & Rural Initiatives (MAFRI) • Dairy Farmers of Manitoba (DFM) • Manitoba Sheep Association (MSA) • Bison and elk producers • Agriculture & Agri-Food Canada (AAFC) & Agri-Environment Services Branch (AESB) • Agri-Food Research and Development Initiative (ARDI) • Manitoba Rural Adaptation Council (MRAC) • University of Manitoba • Western Beef Development Centre and University of Saskatchewan • Manitoba Livestock Manure Management Initiative 	<ul style="list-style-type: none"> • Should build on the existing Ruminant and Forage team. • Support for MFC/MCPA Co-Chairs • MAFRI assist with co-ordination • Good support for collaborative approach. • Annual or semi-annual Workshop involving partners in the identification of research needs, setting of research priorities, development of research initiatives, identification of funding, etc. • Need – to develop a formal process to ensure commitment, establish methodology for identification and input of research needs. This should include setting of Workshop dates well in advance.

1. Tactics to ensure that research addresses the Manitoba forage and grassland industry's needs (continued)

Tactic	Assignment		Implementation
Description	Potential Lead Organization	Partners	Plan of Action
<p>2. A longer term mandate of the Ruminant and Forage Research Ctte will be to initiate the development of a Centre of Excellence for Forage and Grassland Development in Manitoba to initiate and support research and technology transfer that:</p> <ul style="list-style-type: none"> • Is based on successful models adopted in other regions; • Is not a physical “Centre” but rather builds on the strength of all aspects of the forage and grassland industry; • Includes participation from government, industry and producer groups; • Seeks out funding sources including the possible formation of a Manitoba Forage and Grassland Foundation. • Works with researcher scientists to identify and seek funding for innovative projects that address Manitoba issues (e.g. forage adaptation trials). These types of research projects may not be appropriate for peer review in national and international publications, but are very important to the Manitoba forage and grassland industry (e.g. to determine what varieties or practices could be adapted to the Manitoba environment). 	<p>Manitoba Forage Council</p>	<ul style="list-style-type: none"> • Manitoba Cattle Producers Assoc. (MCPA) • Manitoba Agriculture, Food & Rural Initiatives (MAFRI) • Dairy Farmers of Manitoba (DFM) • Manitoba Sheep Association (MSA) • Bison and elk producers • Agriculture & Agri-Food Canada (AAFC) & Agri-Environmental Services Branch (AESB) • Agri-Food Research and Development Initiative (ARDI) • Manitoba Rural Adaptation Council (MRAC) • University of Manitoba • Ducks Unlimited • Western Beef Development Centre and University of Saskatchewan • Manitoba Livestock Manure Management Initiative 	<ul style="list-style-type: none"> • Initiate a Study into a “Centre of Excellence for Forage and Grassland Development”. Such a Study will: <ul style="list-style-type: none"> • Identify the opportunities and challenges • Set out potential mandate including an assessment of whether this should be a “National” Centre of Excellence. • Identify partners • Further develop potential funding opportunities such as the establishment of a Manitoba Forage and Grassland Foundation. • Develop potential operating models including an overview of models adopted in other Countries or Regions.

1. Tactics to ensure that research addresses the Manitoba forage and grassland industry's needs (continued)

Tactic	Assignment		Implementation
Description	Potential Lead Organization	Partners	Plan of Action
<p>3. Encourage the development of more systems-based approaches to research. A current example is the Marchand/La Broquerie Forage/Cattle/Hog Manure project by the University of Manitoba where many disciplines are involved in the research.</p> <p>Another example would be to develop innovative adaptive or alternative production systems that would determine the optimal livestock genetics; the most efficient use of high quality forages/crop residues and grazing management; and the processing and marketing systems required. Research on adaptive or alternative production systems should also include adaptation to climate change.</p>	Manitoba Forage Council	<ul style="list-style-type: none"> • Manitoba Forage Council • Manitoba Cattle Producers Assoc. (MCPA) • Manitoba Agriculture, Food & Rural Initiatives (MAFRI) • Dairy Farmers of Manitoba (DFM) • Manitoba Sheep Association (MSA) • Bison and elk producers • Manitoba Grass Fed Beef Association • Agriculture & Agri-Food Canada (AAFC) & Agri-Environment Services Branch (AESB) • Agri-Food Research and Development Initiative (ARDI) • Manitoba Rural Adaptation Council (MRAC) • University of Manitoba • Western Beef Development Centre and University of Saskatchewan • Ducks Unlimited • Manitoba Livestock Manure Management Initiative 	<ul style="list-style-type: none"> • Could fall within mandate of Forage and Ruminant Ctte or within a newly formed Centre of Excellence. • Partners supportive of greater research on innovative alternative production systems. • Recommend further development of this concept through an “Innovative Alternative Production Systems – Research Feasibility Study”. <ul style="list-style-type: none"> - Identify the research gaps and potential alternative production systems to be studied. (Interviews, Workshop(s)) - Working with partners develop at least three Options for research into “Innovative Alternative Production Systems” along with a Methodology for implementing each Option, funding sources, partners, etc.. - Further discussion with the Agri-Innovation staff of MAFRI to investigate the development of an Innovative Alternative Production Systems initiative.

2. Tactics to enhance extension services to improve forage and grassland producers' agronomic and farm management/marketing practices

Tactic	Assignment		Implementation
Description	Potential Lead Organization	Partners	Plan of Action
<p>1. Prioritize and coordinate extension programs to ensure information is readily available to producers while reducing duplication of efforts.</p> <p>Strategies to accomplish this include:</p> <p>a. Develop an annual workshop (and/or expand MAFRI's semi-annual horizontal team meetings) to include all relevant extension organizations; to share insights regarding the current and future extension priorities, to coordinate their activities and to identify collaboration opportunities.</p> <p>This workshop could identify the most effective strategies to inform new and current producers regarding new and more adaptable forage/livestock management practices including: rangeland management practices; grazing practices; stored forage techniques; and riparian and environmental concerns.</p>	<p>Manitoba Agriculture, Food & Rural Initiatives (MAFRI)</p>	<ul style="list-style-type: none"> • Manitoba Agriculture, Food & Rural Initiatives (MAFRI) Extension Team • Manitoba Forage Council (MFC) • Manitoba Cattle Producers Assoc. (MCPA) • Dairy Farmers of Manitoba (DFM) • Manitoba Sheep Association (MSA) • Bison and elk producers • Manitoba Grass Fed Beef Association • University of Manitoba (U of M) • Agriculture & Agri-Food Canada (AAFC) • Ducks Unlimited (DU) • Forage/livestock organizations • Conservation/riparian groups • Others that are interested in disseminating information on forage and grassland management 	<ul style="list-style-type: none"> • Mtg with Minister Struthers and MAFRI Executive to explore opportunities for prioritizing and coordinating extension programs. • Mtg with representatives of the MAFRI Forage and Beef Horizontal Teams to develop the concept of an Annual Extension Workshop. • Utilize events such as Grazing School, Forage Symposium, Beef and Forage Seminars and the Pasture Tour to identify information/extension needs of forage and livestock producers. • Regular meetings with representatives of MCPA, MFC, DFM, MSA and other groups to ensure prioritizing and coordinating of extension programs.

2. Tactics to enhance extension services to improve forage and grassland producers' agronomic and farm management/marketing practices (continued)

Tactic	Assignment		Implementation
Description	Potential Lead Organization	Partners	Plan of Action
<p>b. Develop a document which summarizes all of the extension efforts that are being conducted by the different agencies (government and non-government) in the province and place this document on the MAFRI, MFC, DU, U of M, AAFC, MCPA and other web sites.</p> <p>c. Ensure that adequate funding is provided to support successful extension activities for technology transfer such as Manitoba Grazing School, producer clubs, on-farm demonstration activities and mentoring programs.</p> <p>d. Ensure that MAFRI and other organizations' extension staff have access to adequate resources and training so that they possess adequate expertise and skills to conduct their extension activities.</p>	Manitoba Agriculture, Food & Rural Initiatives	<ul style="list-style-type: none"> • Manitoba Agriculture, Food & Rural Initiatives (MAFRI) Extension Team • Manitoba Forage Council (MFC) • Manitoba Cattle Producers Assoc. (MCPA) • Dairy Farmers of Manitoba (DFM) • Manitoba Sheep Association (MSA) • Bison and elk producers • Manitoba Grass Fed Beef Association • University of Manitoba (U of M) • Agriculture & Agri-Food Canada (AAFC) • Ducks Unlimited (DU) • Forage/livestock organizations • Conservation/riparian groups 	<ul style="list-style-type: none"> • Mtg with Minister Struthers and MAFRI Executive to explore opportunities for prioritizing and coordinating extension programs. • Mtg with representatives of the MAFRI Forage and Beef Horizontal Teams to obtain support and commitment for the development of a document that summarizes extension programs. • Develop effective feedback mechanisms to ensure that industry partners can provide information to MAFRI and other agencies delivering extension programs regarding the value of technology transfer programs and the need for on-going funding. • Obtaining input from industry partners (MCPA, MFC, MSA, DFM) regarding the value of well trained Extension Staff as well as input into the priority training needs.
<p>2. Assess existing and develop future forage marketing related extension initiatives that:</p> <p>a. Promote the development of new business opportunities including producer-based Value Chains.</p> <p>b. Encourage the development of new funding programs to assist Value Chains with start-up costs.</p>	Manitoba Agriculture, Food & Rural Initiatives	<ul style="list-style-type: none"> • Manitoba Forage Council • Agriculture & Agri-Food Canada • University of Manitoba • Manitoba Grass Fed Beef Producers Association • Manitoba Forage Market Development Group 	<ul style="list-style-type: none"> • Mtg with representatives of the MAFRI Forage Horizontal Team to obtain support and commitment for the development of forage marketing related extension initiatives. • Encourage the development of linkages between forage producers, forage processors and MAFRI Business Development and Value Chain Specialists to promote the development of new business opportunities.

2. Tactics to enhance extension services to improve forage and grassland producers' agronomic and farm management/marketing practices (continued)

Tactic	Assignment		Implementation
Description	Potential Lead Organization	Partners	Plan of Action
c. Educate producers regarding the specific needs of customers in importing countries who want consistent supplies of high quality hay in small or larger square bales.	Manitoba Agriculture, Food & Rural Initiatives	<ul style="list-style-type: none"> • Manitoba Forage Council • Agriculture & Agri-Food Canada • University of Manitoba • Manitoba Grass Fed Beef Producers Association • Manitoba Forage Market Development Group 	<ul style="list-style-type: none"> • Work with MAFRI Forage Horizontal Team members, MFC and others in the planning of events such as the Forage Symposium to ensure that information is presented on the needs of customers in importing countries. • Utilize events such as Ag. Days to highlight forage marketing opportunities. • Ensure that where possible information developed through the Canadian Forage and Grassland Association and MFC is readily available to forage producers and processors in Manitoba. (i.e. Middle East Fact Finding Mission)
3. Encourage governments and telecommunications companies to provide high-speed internet service to all areas of Manitoba.	Keystone Agricultural Producers (KAP)	<ul style="list-style-type: none"> • Manitoba Agriculture, Food & Rural Initiatives (MAFRI) • Keystone Agricultural Producers (KAP) • Manitoba Forage Council 	<ul style="list-style-type: none"> • Need to ensure that KAP Board members are addressing this issue.

3. Tactics to enhance the capacity of the Manitoba forage and grassland industry to develop leadership and sustainability strategies

Tactic	Assignment		Implementation
Description	Potential Lead Org'n	Partners	Plan of Action
<p>1. For the Manitoba forage and grassland industry to be successful it is necessary to have a strong organization to provide leadership and coordination. In the past (and the foreseeable future), the Manitoba Forage Council has served this role. In order to continue to fulfill this role as the primary forage and grassland organization for Manitoba producers and the broader industry the MFC needs to have adequate and sustainable funding. The following points highlight the forage and grassland industry's needs, the role of the MFC, and potential operational and funding avenues for the organization:</p> <p>a. The industry needs to provide input into periodic strategic reviews of various programs such as:</p> <ul style="list-style-type: none"> ▪ forage crop insurance; ▪ improvements in crown lands management; ▪ climate change initiatives; ▪ quantifying the benefits of maintaining grasslands; ▪ innovative uses (e.g. biomass energy, Nutraceuticals, etc.) of forage and crop residues; and ▪ support for Ecological Goods and Services programs. <p>b. The industry needs to re-establish priorities (for research, extension, government policy changes) annually and to develop an on-going survey system to determine the current needs and priorities of the industry.</p> <p>c. The industry needs a coordinator and administrator of resources for extension and demonstration projects to gather producer input and ensure the continued development and improvement of projects such as:</p> <ul style="list-style-type: none"> - Grazing School, - Grazing Clubs, and - Forage Adaptation trials, etc. 	<p>Manitoba Forage Council</p>	<ul style="list-style-type: none"> • Manitoba Agriculture, Food & Rural Initiatives (MAFRI) Extension Team • Manitoba Forage Council (MFC) • Manitoba Cattle Producers Assoc. (MCPA) • Dairy Farmers of Manitoba (DFM) • Manitoba Sheep Association (MSA) • Bison and elk producers • Manitoba Grass Fed Beef Association • University of Manitoba (U of M) • Agriculture & Agri-Food Canada (AAFC) • Ducks Unlimited (DU) • Conservation and riparian groups 	<ul style="list-style-type: none"> • The Manitoba Forage Council provides input into the various programs that are identified on an on-going basis. This input is provided as much as possible given the limited resources of the MFC.

3. Tactics to enhance the capacity of the Manitoba forage and grassland industry to develop leadership and sustainability strategies (continued)

Tactic	Assignment		Implementation
Description	Potential Lead Organization	Partners	Plan of Action
<p>d. The industry needs to provide leadership and participate in the development of a Canadian Forage & Grassland Council (CFGA) to reflect the concerns and issues of Manitoba forage/livestock producers on national and international issues. Once established, the MFC may have an opportunity to provide an administrative support role to this organization.</p>	<p>Manitoba Forage Council</p>	<ul style="list-style-type: none"> • Manitoba Agriculture, Food & Rural Initiatives (MAFRI) Extension Team • Manitoba Forage Council (MFC) • Manitoba Cattle Producers Assoc. (MCPA) • Dairy Farmers of Manitoba (DFM) • Manitoba Sheep Association (MSA) • Bison and elk producers • Manitoba Grass Fed Beef Association • University of Manitoba (U of M) 	<ul style="list-style-type: none"> • MFC is providing leadership in the development of the Canadian Forage and Grassland Association and the on-going operation of this organization. • The CFGA is co-located with the MFC and the Executive Director for the MFC is also the Executive Director for the CFGA. • The CFGA has an important role as a voice for the forage and grassland industry in Canada. With the CFGA located in Manitoba there are opportunities for the Manitoba forage and grassland industry to benefit and the Province to benefit by having the CFGA located in Manitoba. • Recommend that avenues be explored for providing start up funding for the CFGA.
<p>e. The industry needs to promote the multifunctionality benefits of forage and livestock production including those related to Ecological Goods and Services (e.g. greenhouse gas mitigation/ carbon sequestration, biomass energy, etc.), soil health and farm sustainability.</p>	<p>Provincial E.G. and S Committee to provide coordination for E, G & S</p>	<ul style="list-style-type: none"> • Agriculture & Agri-Food Canada (AAFC) • Ducks Unlimited (DU) • Forage/livestock organizations • Conservation/riparian groups 	<ul style="list-style-type: none"> • On-going need to ensure that the multifunctionality benefits are incorporated and that forages and grasslands are recognized for the important role they have. • Provincial E.G. and S. Committee continues to meet and provide coordination.

3. Tactics to enhance the capacity of the Manitoba forage and grassland industry to develop leadership and sustainability strategies (continued)

Tactic	Assignment		Implementation
Description	Potential Lead Org'n	Partners	Plan of Action
<p>2. Given these industry needs the Manitoba Forage Council mandate should be to:</p> <p>a. Continue to develop and enhance partnerships with other organizations that have similar mandates to incorporate forages/grasslands into their programs.</p> <p>b. Act as the umbrella organization to the Manitoba forage and grassland industry and identify the needs of producers and other stakeholder groups to:</p> <ul style="list-style-type: none"> ▪ Advise the Minister for Manitoba Agriculture, Food and Rural Initiatives, MAFRI Executive and Federal MPs on a regular basis regarding the forage and grassland industry's position on current issues; 	<p>Manitoba Forage Council</p>	<ul style="list-style-type: none"> • Manitoba Agriculture, Food & Rural Initiatives (MAFRI) Extension Team • Manitoba Forage Council (MFC) • Manitoba Cattle Producers Assoc. (MCPA) • Dairy Farmers of Manitoba (DFM) • Manitoba Sheep Association (MSA) • Bison and elk producers • Manitoba Grass Fed Beef Association • University of Manitoba (U of M) • Agriculture & Agri-Food Canada (AAFC) • Agricultural Environmental Services Branch of AAFC • Ducks Unlimited (DU) • Conservation/riparian groups 	<ul style="list-style-type: none"> • Initial mtgs have been held with MCPA, DFM, MSA and DU to explore opportunities to work together on forage and grassland initiatives. • Follow-up meetings with these organizations and others to develop specific opportunities for further partnerships. • MFC Display at events such as MCPA AGM, DFM Annual Conference and MSA AGM • Annual mtgs of MFC with Minister MAFRI. Ensure MCPA, DFM and MSA Directors are present at these meetings. • CFGA to develop policy positions on topics of concern to the forage and grassland industry. I.e. Round Up Ready Alfalfa

3. Tactics to enhance the capacity of the Manitoba forage and grassland industry to develop leadership and sustainability strategies (continued)

Tactic	Assignment		Implementation
Description	Potential Lead Organization	Partners	Plan of Action
<ul style="list-style-type: none"> ▪ Initiate support for studies of provincial issues that affect the forage/grassland industry including transportation and regulatory policies, research priorities, etc.; ▪ Represent the forage and grassland industry at provincial and national meetings regarding water stewardship, climate change, etc. ▪ Work closely with MAFRI staff to assist with the development of research and extension plans that include a sustainable model for the Manitoba Forage Council and an effective extension service; ▪ Provide leadership in good governance practices (e.g. board and committee structure, responsibilities and functionality) and develop board governance practices that ensures that directors are fully engaged and that the forage/grassland industry's concerns are promoted. 	Manitoba Forage Council	<ul style="list-style-type: none"> • Manitoba Agriculture, Food & Rural Initiatives (MAFRI) • Canadian Forage and Grassland Association. • Manitoba Cattle Producers Assoc. (MCPA) • Dairy Farmers of Manitoba (DFM) • Manitoba Sheep Association (MSA) • Bison and elk producers • Manitoba Grass Fed Beef Association • University of Manitoba (U of M) • Agriculture & Agri-Food Canada (AAFC) • Agricultural Environmental Services Branch of AAFC • Ducks Unlimited (DU) • Conservation/riparian groups • MRAC 	<ul style="list-style-type: none"> • Provide support to CFGA initiated transportation studies aimed at improving transportation policies for the forage industry. • CFGA is represented on both the Special Crops Value Chain Round Table and the Beef Value Chain Round Table. The Round Tables may provide an opportunity to analyze forage transportation policy. • Provide input and support for studies aimed at documenting the “other” benefits that come from leased Crown Lands (Agricultural Crown Lands) as well as forages in general. • MFC to support the development of CFGA so that CFGA has the capacity to represent the forage and grassland industry at the national level. • MFC should continue to work with Agricultural Environmental Services Branch of AAFC (AESB) at the provincial level to ensure that the forage and grassland industry is represented as programs are developed. • MFC will continue to work with MAFRI Agri-Environment Climate Change program to ensure input from the forage and grassland sector. • MFC and MAFRI are investigating opportunities for a sustainable model for the Manitoba Forage Council. • Initial discussions with the MFC Board of Directors indicate support for a review of the MFC Board, Committee Structure, responsibilities and functionality. Recommend that such a Review be implemented in 2010-11 and that this Review also include a training session with the MFC Board of Directors on Board Governance. (possible MRAC application)

3. Tactics to enhance the capacity of the Manitoba forage and grassland industry to develop leadership and sustainability strategies (continued)

Tactic	Assignment		Implementation
Description	Potential Lead Organization	Partners	Plan of Action
<p>3. For the Manitoba Forage Council (MFC) to provide leadership to the forage/grassland industry it needs to be predictably and adequately funded including a combination of:</p> <p>a. Annual memberships and corporate fees (currently occurring);</p> <p>b. Administrative fees from extension and research projects, etc. (currently occurring);</p> <p>c. Sell sponsorship opportunities to companies (e.g. “Friends of Forage and Grasslands”) (currently occurring);</p> <p>d. Levies or check-off programs (not currently occurring and unlikely to be acceptable to producers);</p> <p>e. Develop a Manitoba Forage & Grassland Trust Fund to accept donations and bequests from individuals, corporations and other sources. Annual interest earned in the fund would be used for administration and projects;</p> <p>f. Partner with organizations such as Manitoba Cattle Producers Association, Dairy Farmers of Manitoba and the Manitoba Sheep Association and Ducks Unlimited.</p> <p>g. Collaboration between Manitoba Forage Council and Manitoba Agriculture, Food and Rural Initiatives to develop a long term agreement that may include financial support as</p>	<p>Manitoba Forage Council</p>	<ul style="list-style-type: none"> • Manitoba Agriculture, Food & Rural Initiatives (MAFRI) • Canadian Forage and Grassland Association. • Manitoba Cattle Producers Assoc. (MCPA) • Dairy Farmers of Manitoba (DFM) • Manitoba Sheep Association (MSA) • Bison and elk producers • Manitoba Grass Fed Beef Association • University of Manitoba (U of M) • Agriculture & Agri-Food Canada (AAFC) • Agricultural Environmental Services Branch of AAFC • Ducks Unlimited (DU) • Conservation/riparian groups • MRAC 	<ul style="list-style-type: none"> • Continue to collect annual membership fees and corporate fees. Membership fee to be assessed annually. • As a commodity group MFC plays a very important role in enabling some organizations to access funds by applying through the MFC. The administrative fees recovered in turn help the MFC to be sustainable. This should continue on a case by case basis. • The Friends of Forage and Grasslands program should be evaluated. There may be an opportunity to expand this program and to bring new “Friends” on. • The Manitoba Forage Market Development Group (MFMDG) (standing Committee of MFC) has implemented a per acre voluntary levy for members in order to provide much needed support for forage market development. MFC staff will work with the MFMDG to expand this Group and to enhance market development efforts. This Group is now called the “Manitoba Forage Marketers”. • The Forage and Grassland Trust in support of the MFC may have merit however should not be a priority now. • Initial proposal submitted to MCPA for the development of a MCPA and MFC partnership. Need to initiate further discussions with MCPA to investigate potential partnership options. • Dairy Farmers of Manitoba supportive of forage research and technology transfer and the role of

<p>well as closer linkages and coordination between MFC and MAFRI.</p>			<p>MFC. Recommend follow-up meetings with DFM representatives to investigate opportunities for annual financial support to MFC as well as support for specific forage projects and programs that will enhance the knowledge and profitability of the dairy industry (i.e. Green Gold clipping program).</p> <ul style="list-style-type: none"> • Manitoba Sheep Association supportive of forage and grassland research and technology transfer and the role of MFC. Recommend follow-up meetings with DFM representatives to investigate opportunities for collaboration as well as support for specific forage projects and programs. Very interested in complimentary grazing systems, rotational grazing and multispecies grazing. • MAFRI and MFC are considering a number of options for an agreement between MFC and MAFRI to enhance the sustainability of the MFC. • Option(s) developed to be vetted by MFC Board of Directors for input and support.
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4. Tactics to improve market opportunities through improved logistics and infrastructure

Tactic	Assignment		Implementation
Description	Potential Lead Organization	Partners	Plan of Action
<p>To improve market opportunities for Manitoba's forage and grassland industry the industry should:</p> <p>1. Work with ruminant livestock producers to support establishment of local processing to supply niche markets. This needs to be tied in with CFIA guidelines and with the Value Chain initiatives. Some research studies will be required.</p>	Manitoba Forage Council	<ul style="list-style-type: none"> • Manitoba Agriculture, Food & Rural Initiatives (MAFRI) • Keystone Agricultural Producers (KAP) • Manitoba Grass Fed Beef Producers Association • MCPA • MSA • Others 	<ul style="list-style-type: none"> • There is not agreement that this should be a priority item within this Forage and Grassland Strategy.
<p>2. Continue to build on the forage marketing potential of the Manitoba forage industry by identifying new markets that Canadian producers and exporters can feasibly supply on an ongoing basis, especially local markets for high quality forage (e.g. dairy, equine, forage finished beef/lamb) and emerging export markets. Also consistent local markets are needed for lower quality forage and crop residues.</p>	Manitoba Forage Council	<ul style="list-style-type: none"> • Manitoba Rural Adaptation Council (MRAC) • Agri-Food Research and Development Initiative (ARDI) • Agriculture & Agri-Food Canada (AAFC Market Division) • Manitoba Agriculture, Food & Rural Initiatives (MAFRI) • Manitoba Trade and Investment • Canadian Forage and Grassland Association 	<ul style="list-style-type: none"> • The Manitoba Forage Market Development Group (MFMDG (standing Committee of MFC) was recently formed to promote and enhance the development and competitiveness of Manitoba forage markets including market development and innovation for both long fiber hay and processed product so as to increase the profitability of the forage exporting sector. • MFMDG will be a member of the CFGA Forage Export Ctte. • Long Term International Strategy (LTIS) for Forage Exports developed by CFGA (MFC Administering and Coordinating) • Based on the results of the LTIS the CFGA has submitted and received approval on an AgriMarketing Program proposal to enhance forage markets in US, China, Japan and the Middle East. • Middle East Fact Finding Mission report being prepared and will be shared at Forage Symposium.

4. Tactics to improve market opportunities through improved logistics and infrastructure (continued)

Tactic	Assignment		Implementation
Description	Potential Lead Org'n	Partners	Plan of Action
<p>3. Initiate discussions with the University of Manitoba Transport Institute into forage marketing transportation. This Study could include: comparing costs in the Canadian hay supply chain compared to the costs in competitors' (e.g. U.S.) supply chains and to identify opportunities to harmonize freight policies with the U.S.; addressing differences in infrastructure between Canada and competitive exporting countries; identifying additional infrastructure that Canada needs to enable it to be a leader in supplying forage to international markets.</p>	<p>Manitoba Forage Council</p>	<ul style="list-style-type: none"> • Manitoba Rural Adaptation Council (MRAC) • Agri-Food Research and Development Initiative (ARDI) • Agriculture & Agri-Food Canada (AAFC) • Transport Institute University of Manitoba 	<ul style="list-style-type: none"> • The Long Term International Strategy for Forage Exports has identified transportation issues as the most important hurdle in the development of forage export markets. • The Middle East Fact Finding Mission has determined that while Canada can be competitive production wise we have significant transportation issues. • CFGA has applied for funding from the AgriMarketing Program and will also be applying for funding from the Canadian Agriculture Adaptation Program to complete a study into transportation barriers in the forage industry. Study should consider utilizing the U of M Transport Institute. • CFGA to raise transportation issue at Special Crops Value Chain Roundtable. • MFC to support CFGA initiatives
<p>4. Work with Federal and Provincial Governments and the forage marketing sector (forage exporters) to develop programs that promote the development of export markets for Manitoba forage production.</p>	<p>Manitoba Forage Council</p>	<ul style="list-style-type: none"> • Manitoba Agriculture, Food & Rural Initiatives (MAFRI) • Manitoba Trade and Investment • AAFC Market Division • MFMDG (MFC) 	<ul style="list-style-type: none"> • Manitoba Forage Market Development Group (Manitoba Forage Marketers) committed to ensuring that Manitoba Forage Council continues with a Forage Marketing Booth at World Dairy Expo in Madison. • MAFRI Forage Specialists are an integral component in the marketing of Manitoba forage products and it is recommended that MAFRI provide support for Forage Specialists to attend events such as the World Dairy Expo.
<p>5. Continue to work with the Churchill Gateway Development Corporation to develop opportunities to use the port of Churchill for hay exports.</p>	<p>Manitoba Forage Council</p>	<ul style="list-style-type: none"> • MAFRI • Churchill Gateway Development Corporation • MRAC • Manitoba Trade and Investment • AAFC • MFMDG (MFC) 	<ul style="list-style-type: none"> • The Manitoba Forage Council along with support from the Churchill Gateway Development Corporation has applied to MRAC to do a complete market environmental scan of the Manitoba forage industry including the potential for greater exports to world markets. A main component of this Study will be an assessment of marketing through the Port of Churchill.

4. Tactics to improve market opportunities through improved logistics and infrastructure (continued)

Tactic	Assignment		Implementation
Description	Potential Lead Org'n	Partners	Plan of Action
6. Partner with other agricultural groups such as the Canadian Special Crops Association to present a united front and to use a proactive approach to advance the industry's concerns to legislators and regulators regarding logistics and infrastructure issues (particularly rail).	CFGA with support from MFC	<ul style="list-style-type: none"> • Canadian Special Crops Association • Pulse Canada • Other commodity organizations and exporters 	<ul style="list-style-type: none"> • CFGA to raise transportation issue at Special Crops Value Chain Roundtable. • CFGA to develop links with Pulse Canada in further studying and addressing logistics and infrastructure needs.
7. Establish stronger partnerships with Export Development Canada, government officials (e.g. Canadian trade officers and consulate officials) and selected private sector leaders to ensure that systems are in place to guard against non payment for forage exports.	CFGA with support from MFC	<ul style="list-style-type: none"> • Agriculture & Agri-Food Canada (AgriMarketing Program) • Manitoba Agriculture, Food & Rural Initiatives (MAFRI) • Manitoba Trade and Investment 	<ul style="list-style-type: none"> • CFGA Forage Export Committee will be developing protocol including a Website to ensure that systems are in place to guard against non payment for forage exports.
8. Create relationships and/or partnerships with key government policy makers in importing countries to provide market intelligence and to ensure that our industry keeps apprised of possible future changes to policy (e.g. environmental issues, etc.).	CFGA with support from MFC	<ul style="list-style-type: none"> • Agriculture & Agri-Food Canada (AgriMarketing Program) • Manitoba Agriculture, Food & Rural Initiatives (MAFRI) • Manitoba Trade and Investment 	<ul style="list-style-type: none"> • CFGA Forage Export Committee with support from exporters across Canada will be working with AAFC AgriMarketing Program to keep abreast of changes in policy of importing countries. • CFGA working closely with AAFC Market Specialists to maintain relations with Canadian trade officers. • AAFC Market Specialists to provide market intelligence re: importing countries policy.
9. Producers in the export market or those wishing to enter the export market must be aware of the type of product that is in demand. This may mean that producers who wish to pursue export markets will need to convert to production of small or larger square bales. There may also be a demand for different forms of densified product such as cubes or pellets.	Manitoba Forage Council	<ul style="list-style-type: none"> • Manitoba Rural Adaptation Council (MRAC) • Agri-Food Research and Development Initiative (ARDI) • AAFC • MAFRI • Manitoba Forage Market Development Group 	<ul style="list-style-type: none"> • Recommend the development of programs or studies to ensure that forage producers/processors have access to: <ul style="list-style-type: none"> • Information re: type of product in demand. • R&D into new densified product lines. • Information regarding the production and marketing of forage products.

5. Tactics to improve the image of agriculture and forage/grassland production

Tactic	Assignment		Implementation
Description	Potential Lead Organization	Partners	Plan of Action
<p>1. Work with mass media to allow for the discussion of current farm and rural issues in the main stream media (e.g. such as the column in the Free Press by Laura Rance). Also to have a team of technical experts who could respond quickly to misinformation on current issues including those related to health issue or the environment.</p>	<p>Manitoba Forage Council on forage and grassland issues</p>	<ul style="list-style-type: none"> • Manitoba Farm Writers and Broadcasters Association (MFWBA) • Manitoba Agriculture, Food & Rural Initiatives (MAFRI) • AAFC • U of M 	<ul style="list-style-type: none"> • Ensure mass media has up-to-date information on forage and grassland issues. • Utilize MAFRI Forage Specialists, AAFC, U of M and others to provide information to the mass media.
<p>2. Develop school information packages for use by teachers on various forage/livestock issues and ensure consistent delivery among all teachers. Need to have good PowerPoint slide sets and/or video that teachers could use in their class sessions and also a listing of producers who would be willing to volunteer their time to make accurate presentations to the classes.</p> <p>This could include the development of a DVD that is pre-recorded either as a presentation or something more hands-on (similar to information pieces the Canola Council has put out and uses in schools and other venues).</p>	<p>Agriculture in the Classroom</p>	<ul style="list-style-type: none"> • Agriculture in the Classroom Manitoba (AITC-M) • Glenlea Farm Education Centre (University of Manitoba) • Manitoba Forage Council • Manitoba Agriculture, Food & Rural Initiatives (MAFRI) 	<ul style="list-style-type: none"> • Although an important area this is not viewed as a priority for the forage and grassland industry. • Work with other organizations and interested individuals willing to assist the forage and grassland sector in the development of resources that could be utilized for information packages.

8.0 Appendices

8.1 Appendix 1 – Manitoba Forage and Grassland Strategic Workshop Agenda

Manitoba Forage and Grassland Strategic Workshop Agenda

Held at the William Glesby Centre
11-2nd Street N.E.
Portage la Prairie, MB
April 8, 2009

9:30 a.m. to 3:30 p.m.

to provide input into a

Manitoba Forage and Grassland Industry Strategic Plan

facilitated by



Support provided by



Agenda
Manitoba Forage and Grassland Strategic Workshop
William Glesby Centre, 11-2nd Street N.E.
Portage la Prairie
April 8, 2009

Facilitated by Randy Baldwin and Paula Havixbeck, Kelwin Management Consulting

9:30a.m.	Registration & coffee	
10:00	Welcoming Remarks	Wayne Digby, MFC Executive Director & Randy Baldwin, Kelwin Management Consulting
10:10	Objectives for Today's Session	Paula Havixbeck, Kelwin Management Consulting
10:20	Manitoba Forage Industry Profile	Presenter not confirmed
10:40	The Future Role of Forage and Grassland in Sustainable Agriculture	Ian Wishart, Producer and President Keystone Agricultural Producers
11:15	Questions and Discussion	
11:45	Workshop Ground Rules	Randy Baldwin
Noon	Lunch Break	
12:45	Workshop Topic #1 – New Forage Opportunities Small group discussions to identify new forage opportunities	
1:15	Breakout Group Reports	
1:45	Workshop Topic #2 – Challenges and Solutions Small group discussions to identify and discuss challenges and solutions	
2:15	Breakout Group Reports	
2:45	What We Have Heard Today	Paula Havixbeck
3:15	Summary and Next Steps	Randy Baldwin
3.30	Manitoba Forage Council AGM	Jim Lintott, MFC President and Wayne Digby, MFC Executive Director

8.2 Appendix 2 – Manitoba Forage and Grassland Industry Trends, Challenges, Opportunities and Tactics

In preparation for the Forage and Grassland Strategic Workshop, the consultants conducted interviews with a range of industry stakeholders and identified the Trends, Challenges, Opportunities and Tactics that are shown below. This is not intended to be an exhaustive – but is designed to “prime the pump” for discussions that will occur at the workshop.

Trends

A number of trends have been occurring in recent years, including:

1. Increased operating costs including transportation, fertilizer and other costs
2. Increased Manitoba weather-related problems including too much moisture, too little moisture, increased winterkill, etc.;
3. Increased economic pressures (poor cattle prices, high grain prices, etc.) have caused some farmers to break forage and pasture stands, drain wetlands, etc.) in hopes of improving their overall farm’s profitability;
4. Prolonged poor economic returns from cattle production have caused many producers to reduce the size of their cattle herds (and forage acres). Meanwhile sheep and horse numbers have held relatively steady.
5. Increased potential export opportunities to traditional (e.g. U.S. dairy states) and nontraditional (e.g. Middle East, Asia, Mexico, California, Florida) markets;
6. Increased levels of education among younger farmers (e.g. agricultural degrees or diplomas) are providing new techniques to improve financial and agronomic management practices;
7. Increased concern about soil health and increased recognition of the beneficial role that forages can play in improving the sustainability of crop rotations and farm practices;
8. Increased use of technology (e.g. round bale silage, preservatives, large square balers, etc.) has offset some of the negative impacts of weather, economic pressures, etc.;
9. Increased interest in biomass (e.g. switchgrass and crop residues) as a source of renewable energy;²⁰ and
10. Increased weather-related problems in potential hay export markets, especially prolonged drought, has increased demand for Manitoba hay.

²⁰ Biomass energy, or bioenergy, refers to all forms of renewable energy that are derived from plant materials produced by photosynthesis. Biomass fuels can be derived from wood, agricultural crops and other organic residues. These fuels can be obtained from many sources in Canada, including sawmills, woodworking shops, forest operations and farms. Source: Manitoba Science, Technology, Energy and Mines website (<http://www.gov.mb.ca/stem/energy/initiatives/biomass.html>).

Challenges

Many of the Trends noted in the previous section have created challenges for the forage industry. Several of the trends noted have decreased the potential size and vitality of the forage production and grassland industry, including:

1. Increased operating costs including transportation, fertilizer and other costs reduced potential net financial returns;
2. Increased weather-related problems including too much moisture, too little moisture, increased winterkill, etc. reduced potential net financial returns by decreasing both the quantity and quality of forage production; and
3. Increased economic pressures (prolonged periods of poor cattle prices, recent higher grain prices, etc.) have reduced forage and grassland acreage

Opportunities

Other trends have had positive impacts on the forage and grassland industry, including:

1. Increased potential export opportunities to traditional (e.g. U.S. dairy states) and nontraditional (e.g. Middle East, Asia, Mexico, California, Florida) markets;
2. Increased levels of education among younger farmers (e.g. agricultural degrees or diplomas) are providing new techniques to increase financial and agronomic management practices;
3. Increased use of technology (e.g. round bale silage, preservatives, large square balers, etc.) has offset some of the negative impacts of weather, economic pressures, etc.;
4. Increased concern about soil health and increased recognition of the beneficial role that forages can play in improving the sustainability of crop rotations and farm practices; and
5. Increased weather-related problems in potential hay export markets, especially prolonged drought, has increased demand for Manitoba hay.

Tactics

Several tactics have been suggested that the Forage and Grassland Industry could use to overcome the Challenges that were identified and to capture the Opportunities identified above, including:

1. To capture increased international forage export sales, the industry should seek government support to undertake a comprehensive study of the costs in the Canadian Value Chain compared to the costs in competitors' (e.g. U.S.) supply chains. It is expected that such a study would identify opportunities to:
 - Harmonize freight policies with the U.S.
 - Address differences in infrastructure between Canada and competitive exporting countries.
 - Identify additional infrastructure that Canada needs to enable it to be a leader in supplying forage to international markets.

- Identify opportunities to:
 - Partner with other agricultural groups such as the Canadian Special Crops Association who have conducted research in this area and may be willing to join forage producers to lobby governments and transporters for this cause. Exporters need to present a united front and to use a proactive approach to advance these significant issues with regulators to solve the transportation issues (particularly in rail).
 - Create relationships and/or partnerships with some of the key government policy makers in importing countries to keep apprised of possible future changes to policy in response to environmental issues, etc.
 - Establish stronger partnerships with government officials (e.g. Canadian trade officers and consulate officials) and selected private sector leaders to ensure payment occurs.
 - Identify new markets that Canadian producers and exporters can feasibly supply on an ongoing basis, especially emerging markets that our competitors are not pursuing. For times when it is less appealing for other countries to import Canadian hay, other (contingency) markets need to be identified that can use the high quality hay, likely within Canada (e.g. dairy, equine, forage finished beef).
 - Educate producers about what exporters and customers in importing countries want, especially regarding the bale size (small or large square) and quality requirements.
 - Explore opportunities to develop one or more Value Chains including hay producers and marketers and logistics providers to supply growing export markets and to provide feedback and market information to growers on current needs and future trends. This would create a more collaborative/cooperative framework among Manitoba hay producers, rather than the competitive situation that generally currently exists.
 - Work with equipment manufacturers, the Prairie Agricultural Machinery Institute and others to encourage producers who wish to pursue export markets to convert to square bale production
- 2. Manitoba Forage Council should explore options for collection of a check-off, perhaps levied on hay sold and from producers of end products to support:
 - Research into quantifying the benefits of maintaining grasslands, including the Ecological Goods and Services created;
 - Research into new innovative uses (e.g. biomass energy, nutraceuticals, etc.) of forage legumes, grasses and crop residues;
 - Agronomic and genetic forage research that would aim to improve yields and quality of forage produced, lengthen stand life, improve winter hardiness, reduce fertilizer needs, etc.;

- Studies to quantify the sustainability benefits of developing agriculture production systems that combine forage, livestock and grain production on the same farm or on adjacent integrated farm operations (perhaps using Value Chain concepts to share the benefits created). This could better use the livestock manure nutrients by using them over a larger acreage – thus, reducing over-application and avoiding buildup of excess phosphorus on land surrounding intensive livestock operation;
 - Promote of the many benefits of forage production including those related to Ecological Goods and Services (e.g. greenhouse gas mitigation / carbon sequestration, biomass energy, etc.), soil health and farm sustainability;
 - Provide ongoing support to programs like Grassland Clubs and in-field activities which provide good opportunities for forage producers to learn about machinery, varieties, grassland management, etc. These initiatives are especially beneficial for new entrants into the forage industry (e.g. farmers who have only been growing grain); and
 - Work closely with the Manitoba cattle and sheep producers to identify ways to improve the profitability and long-term sustainability of those sectors – thus, creating more demand for harvested and grazed forage. Some of the key issues include addressing local slaughter/processing needs, beef’s perceived image regarding “healthfulness” versus other types of meat.
3. Work with educational institutions and extension-oriented organizations, including the University of Manitoba; Manitoba Agriculture, Food and Rural Initiatives; Prairie Farm Rehabilitation Agency; Ducks Unlimited; Agriculture in the Classroom, etc. to continue to improve:
- Education of students and outreach activities with existing producers regarding new technological practices;
 - Improved delivery of educational outreach to rural and remote locations via electronic or other innovative means; and
 - Extension activities with the general public, school students, etc. promoting the benefits of good farmland stewardship.

8.3 Appendix 3 – Selected Manitoba Forage and Pasture Statistics

The table below shows some of the more notable trends from 2001 to 2006, 2007 or 2008, depending on the particular data source.

Number of Farms Reporting	2001	2006	% Change	2008	% Change 2001 to 2008
Alfalfa and mixtures	10,105	9,238	(-8.6%)		
Other tame hay	3,852	4,115	6.8%		
Forage seed	681	606	(-11.0%)		
Improved pasture	5,980	5,819	(-2.7%)		
Native Pasture	11,431	10,081	(-11.8%)		
Seeded Area (thousand acres)					
Alfalfa and mixtures	1,625	1,696	4.4%		
Other tame hay	543	640	17.9%		
Total tame hay	2,168	2,336	7.7%	2,450	13.0%
Pasture Area (thousand acres)					
Improved	948	1,231	29.9%		
Native	3,905	3,826	(-2.0%)		
Production					
Tame hay (thousand tons)	3,450	3,470	0.6%	3,800	10.1%
Forage seeds (million lb)	29.9	70.4	135.5%		
Farm Value (million \$)					
Tame hay production	187.8	243	29.4%		
Forage seed production	13.5	33.7	149.6%		
Total	201.3	276.7	37.5%		
Farm Cash Receipts (million \$)					
Tame hay sales	20.0	15.1	(-24.5%)	14.7	(-26.5%)
Forage seed sales	13.5	23.8	76.3%	23.0	70.4%
Trade (million \$)				2007	(2001 to 2007)
Tame hay	8.0	6.4	(-20.0%)	6.3	(-21.3%)
Alfalfa pellets & meal	4.1	0.3	(-92.7%)	0.4	(-90.2%)
Forage seeds*	36.1	46.2	28.0%	56.3	56.0%
Total	48.2	52.9	9.8%	63.0	30.7%

* Includes seed from other western provinces and imports.

8.4 Appendix 4 – Update of Manitoba Forage Industry Profile Information

Table 1: Number of Farms Reporting Forage Production 2001 & 2006

Number of Farms	2001	2006	% Change
Total Farms	21,071	19,054	(-9.6%)
Alfalfa and Alfalfa Mixtures	10,105	9,238	(-8.6%)
Other Tame Hay	3,852	4,115	6.8%
Forage Seeds	681	606	(-11.0%)
Improved Pasture	5,980	5,819	(-2.7%)
Native Pasture	11,431	10,081	(-11.8%)

Source: Statistics Canada (Census of Agriculture) / MAFRI

Table 2: Manitoba's Land Base 2001 & 2006

(000 acres)	2001	2006	% Change
Total Land	135,340.8	135,340.8	0%
Farmland	18,784.4	19,073.0	1.5%
Total Improved	13,230.1	13,160.6	(-0.5%)
Land in Crops	11,650.6	11,616.5	(-0.3%)
Summerfallow	631.9	312.8	(50.5%)
Alfalfa and Mixtures	1,625	1,696	4.4%
Other Tame Hay	543	640	17.9%
Improved Pasture/Other	947.6	1,231.3	30.0%
Unimproved Pasture/Hayland	3,905.2	3,825.7	(-2.0%)
All Other Land	1,649.1	2,086.8	26.5%

Source: Statistics Canada (Census of Agriculture) / MAFRI

Table 3: Manitoba Seeded and Harvested Tame Hay Area 2001 to 2008

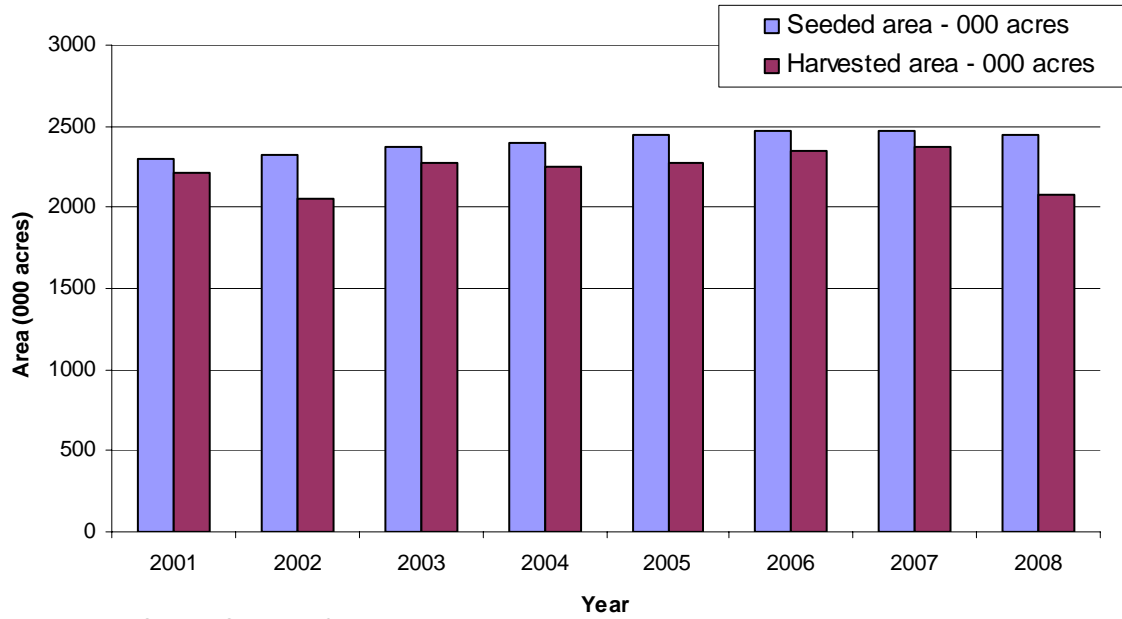


Table 4: Manitoba Tame Hay Yield 2001 - 2008

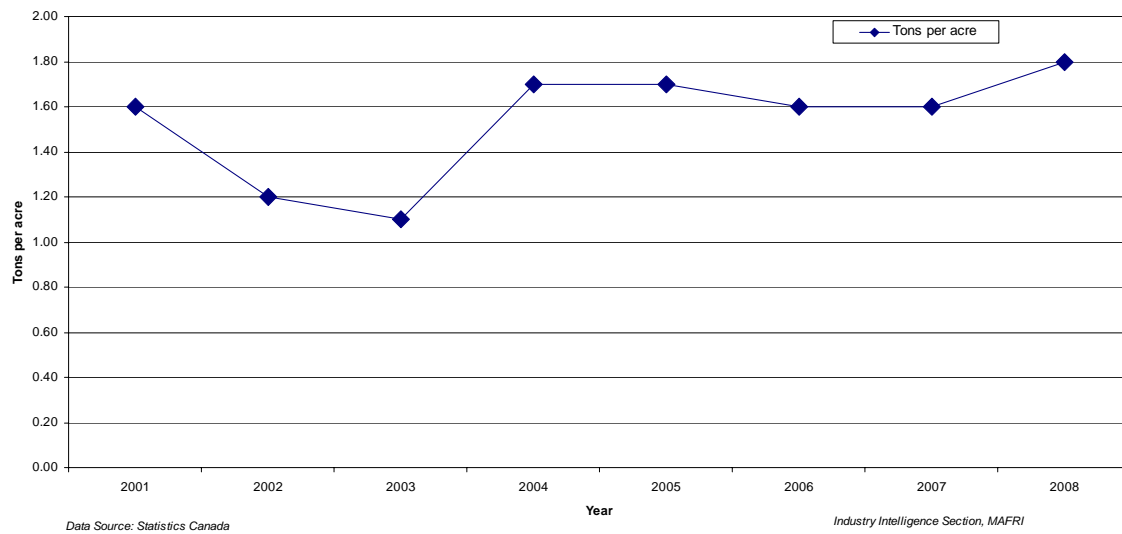


Table 5: Manitoba's Percentage of Canadian Tame Hay Production 2001 - 2008

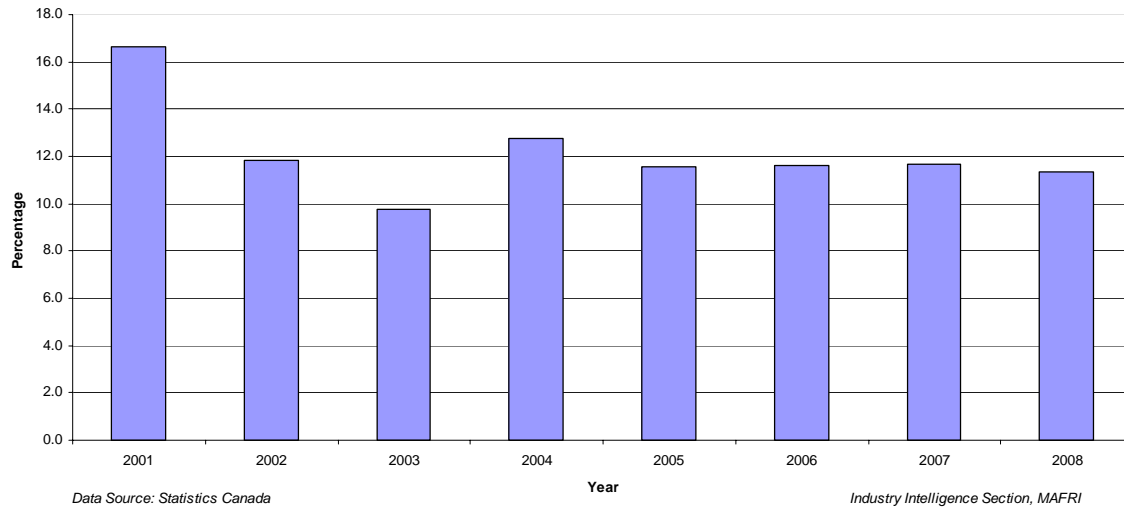


Table 6: Manitoba's Tame Hay Prices 2001 - 2008

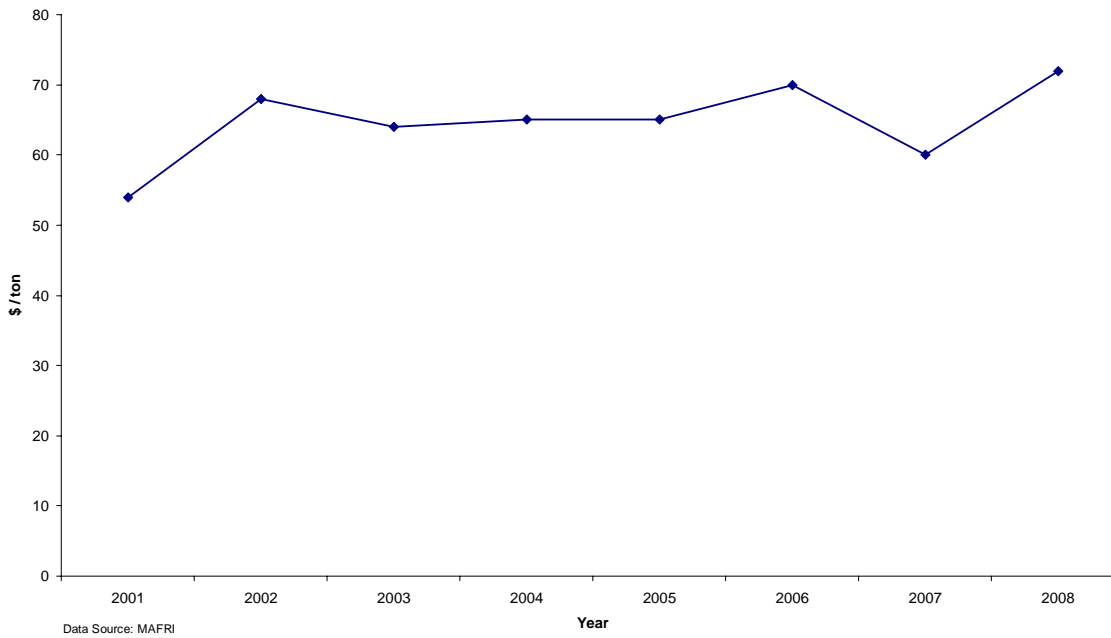


Table 7: Manitoba's Tame Hay & Forage Seed Farm Value 2001 - 2008

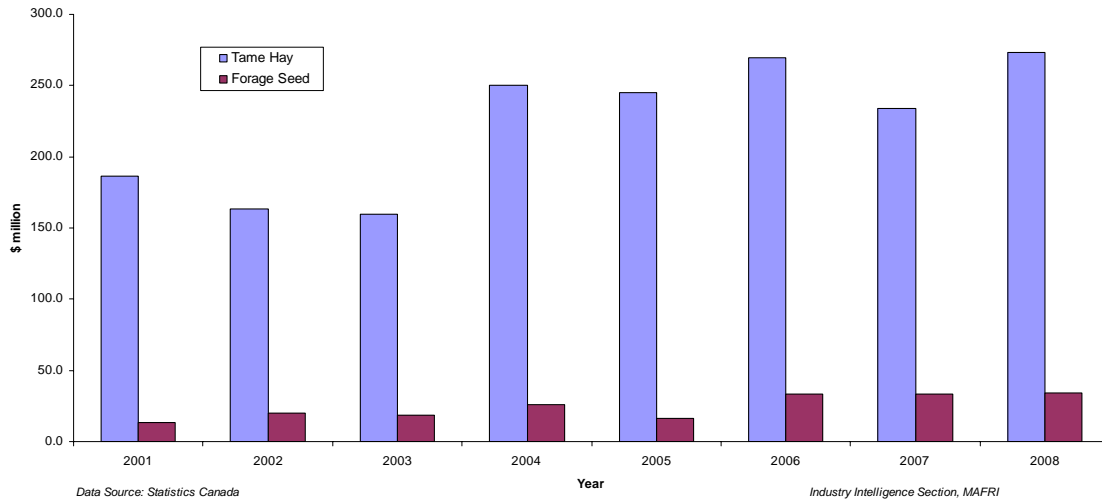


Table 8: Manitoba's Farm Value of Forage Seed Production 2001 - 2008

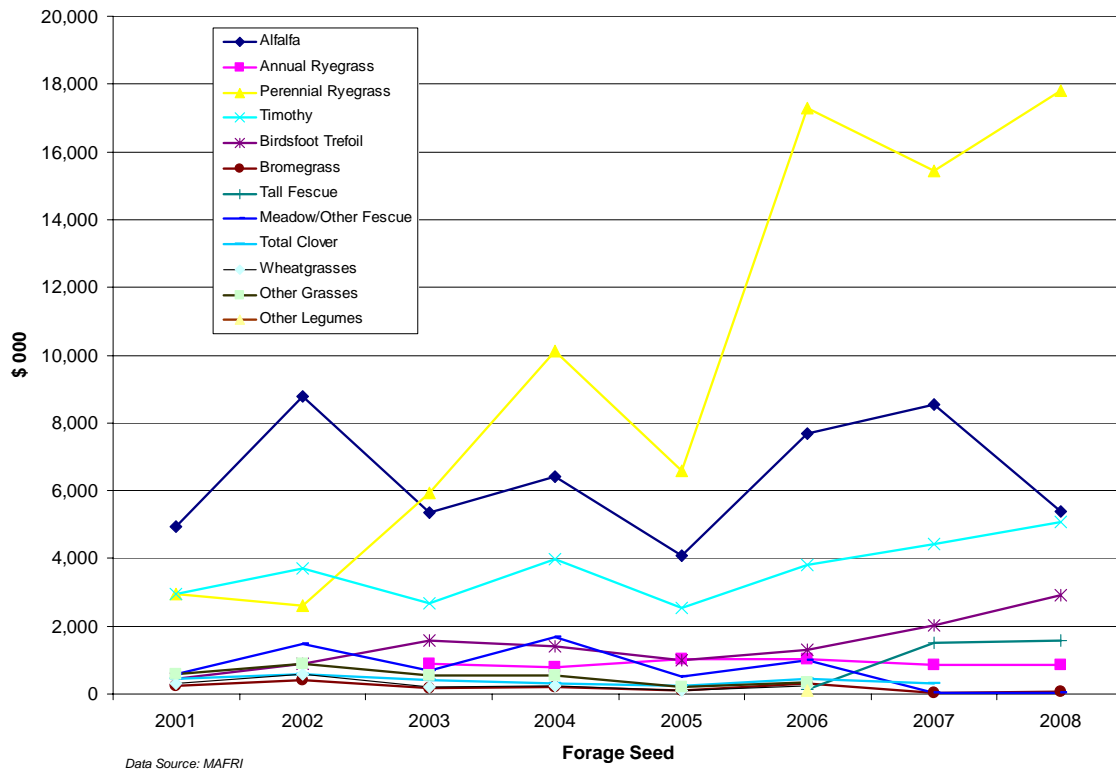


Table 9: Manitoba’s Value of Hay and Forage Seed Exports 2001 – 2007

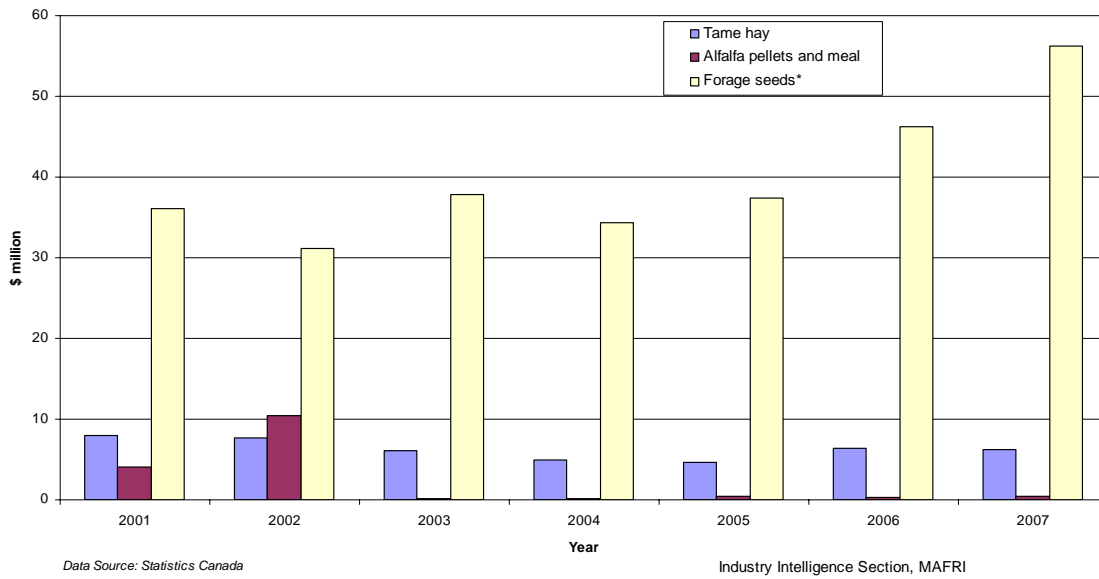
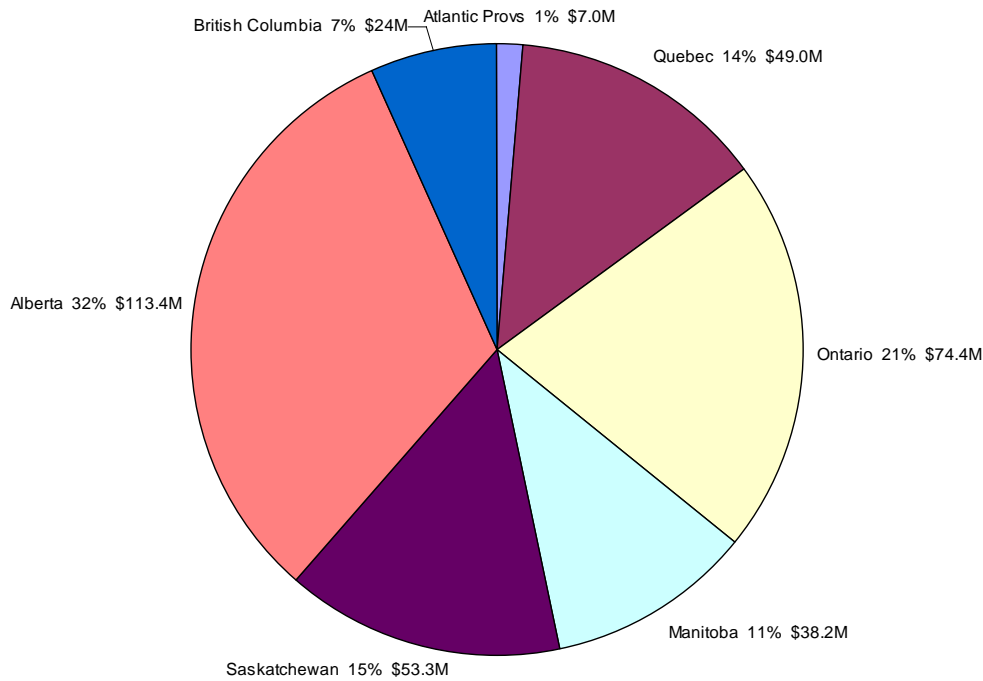


Table 10: Farm Cash Receipts by Province for Hay/Clover & Forage/Grass Seed 2008



8.5 Appendix 5 – Forage and Grassland Industry Strategic Solutions/Tactics Identified at the Strategic Workshop

This section summarizes the Strategic Solutions (i.e. Strategic Tactics) that were identified from the research²¹ and during the Manitoba Forage and Grassland Industry Strategic Planning Workshop. Many of these Strategic Solutions are designed to overcome the Challenges and to capture the Opportunities that were identified in the earlier sections of this document and are closely aligned with the Trends that were identified in Section 2.1.

The Key Strategic Solutions have been grouped into relevant categories to make them consistent with the Challenges and Opportunities that were identified and shown earlier in this report. The categories that were used for grouping the Manitoba Forage and Grassland Industry Strategic Solutions include:

1. Research Strategic Solutions;
2. Extension, Agronomic/Farm Management and Marketing Strategic Solutions;
3. Policy-Related Strategic Solutions
4. Transportation, Infrastructure and Logistics Strategic Solutions;
5. Education Strategic Solutions.

The Key Strategic Solutions are shown below within each of these six categories.

1. **Research Strategic Solutions:**

Access funding resources and conduct research to improve forage production, and preservation/utilization including:

- New crops, new crop varieties and new technologies (e.g. GMO, non-bloating alfalfa, better drought tolerance and winter hardiness);
- Synergies between forages and other crops;
- Intercropping advantages;
- Possible reduced E. coli risk of forage finished livestock compared to grain finished livestock (potentially enough to make a public claim of this); and
- Airtight bale processing (e.g. vacuum wrap) and biodegradable wrapping material;
- Use of “weeds” as forage in emergencies;
- Better perennial ryegrass for local needs;
- Use of higher levels of forage in complete rations;
- Alternative uses of forage, grasses and crop residues, including:
 - Use of biomass (including forage crop residues) for combined heat and power and erosion control;
 - Use of biomass crops (including willow and poplar) in wetlands to remove nutrients including phosphorus, nitrogen and other nutrients; and

²¹ This information was summarized in the Pre-Workshop Reading Materials that were provided to participants prior to the Manitoba Forage and Grassland Industry Strategic Planning Workshop.

- Silviculture opportunities, particularly the co-habitation and harvesting of forage and woody species
- Interdisciplinary collaboration opportunities including Agriculture and Agri-Food Canada; University of Manitoba (e.g. Human Nutrition, Agricultural and Food Sciences); Richardson Centre for Functional Foods and Nutraceuticals; Manitoba Agriculture, Food and Rural Initiatives and others to research and quantify the wide range of benefits that result from forage production (economic, environmental, etc.), including:
 - Carbon sequestration effects of forages including life cycle carbon sequestration analysis;
 - Role of forages in mitigating Phosphorus and Nitrogen problems;
 - Potential impact of carbon credits; and
 - Increase of Phosphorus uptake using inoculants.
- Research and promote soil health benefits of forages including:
 - Intercropping demonstrations;
 - Grazing clubs;
 - Crop sharing arrangements;
 - Support and lobby for Ecological Goods and Services;
 - Continue to collaborate with research and extension partners;
 - Promote reduced use of pesticides and fertilizer that result from including forage in crop rotations;
- Consider a check-off and/or the establishment of a charitable foundation to support research; and
- Develop large-scale heating projects for public buildings using compacted forage and crop residues.

2. **Extension, Agronomic/Farm Management and Marketing Strategic Solutions:**

Educate producers using extension services and personnel (and improved delivery of educational outreach to rural and remote locations via electronic or other innovative means) regarding better management techniques (forage and livestock production and environmental benefits). This would include extension and education delivered by MAFRI as well as by conservation organizations and educational institutions – e.g. University of Manitoba and the Glenlea Farm Education Centre; Agri-Food Canada-Agri-Environmental Services Branch (formerly PFRA); Ducks Unlimited; industry sources; mass media, etc. using tours; meetings; grazing, forage and/or livestock clubs; as well as remote interactive video delivery systems that are available in most areas of the province. Extension topics would include:

- Best Management Practices for stewardship of their land and water resources – while the vast majority of livestock producers are excellent, there is an ongoing need to educate some producers to use better stewardship practices. It may be beneficial to set an objective for the Manitoba forage and grassland industry to increase forage productivity by 10% and quality (i.e. feed quality) by 10% within ten years in order to increase producers’ profitability;
- Application of research findings and technology developments that will improve their commercial forage/livestock operations;
- Green manure benefits (improved soil tilth and fertility, erosion control, etc.);
- Improved human resource management skills;
- Ecological Goods and Services (i.e. “carbon sink”) concepts;
- Sustainable management practices;
- Advantages of finishing more cattle in Manitoba using protocols that best utilize the producers’ resources and also meet consumers’ demands for conventional; natural; organic; and grass finished cattle/bison/elk/sheep. Inclusion of more forages holds the potential to:
 - Lower total energy inputs;
 - Stabilize topsoil;
 - Use perennial crops; and
 - Improve water management.

Educate farmers, especially young farmers who have higher levels of education (e.g. agricultural degrees or diplomas), regarding new techniques and technologies to improve financial and agronomic management practices, including to:

- Improve haying and grazing management including round bale silage, preservatives, large square balers, swath grazing to extend life of legumes in pastures, etc.;
- Improve grazing management (e.g. critical rest period, stocking rates, rotational grazing, multiple forage species, etc.) especially on native grasses ;
- Use more legume forages to reduce requirement for inputs (especially nitrogen fertilizer);
- Improve quality of forage produced (too much poor quality being produced);
- Improve soil health and environmental benefits including:
 - Stop encroachment of invasive species (e.g. spurge, aspen, willow);
 - Improve management of Manitoba Crown Lands (increased carrying capacity and greenhouse gas (GHG) mitigation/management);
- Encourage equipment sharing among producers;
- Encourage land trading between livestock producers and grain producers (similar to potato growers) to get more cropland into forage rotations;
- Improve productivity of marginal grasslands, including native grasslands and Crown Lands;

- Use hay crop residues for biomass (heat).
- Expand use of perennial ryegrass and annual forages to extend grazing period (this could be enhanced by the availability of better forage varieties of perennial ryegrass); and
- Manage their operations to maximize benefits and income from Ecological Goods and Services (EG&S and its predecessor, ALUS) programs including:
 - Incorporation of Bio-char into soil;
 - Inclusion of forages in crop rotations, especially for grain farmers;
 - Use intercropping and multi-species cover crops to increase production;
 - Use forages to improve soils (e.g. to break through hardpan);
 - Use forages and grasses for phyto-remediation and for ;
 - Make better use of native grass varieties for grazing and hay production and for carbon sequestration; and
 - Improve winter site management;

Develop domestic and export markets for premium quality hay and alternative uses for lower quality hay and forage byproducts (using a Value Chain approach) including:

- Develop organic and international hay markets (including export/import protocols, processing capacity, and local production);
- Develop human consumption uses of forage (nutraceutical/bioactives) and explore potential pet food uses;
- Find new markets for legume hay (e.g. to local beef and dairy cattle, bison, elk and sheep; and to export markets) and for grass hay (e.g. horse markets);
- Identify a marketing specialist who will take charge of marketing Manitoba hay into “export” markets including arranging financing, logistics and bringing together buyers and sellers to build relationships;
- Work with cattle/bison/elk/sheep/poultry producers to promote the environmental and human health benefits of raising animals on forage throughout most (or all) of their lives. This would include developing techniques, practices and processes that increase the levels of conjugated linoleic acid (CLA), Omega-3 content, and other beneficial bioactive compounds in the meat to enable processors/producers to make a significant nutritional claim;
- Market smaller packages (e.g. compressed small bales) to high value markets;
- Increase hay exports to traditional (e.g. U.S. dairy states) because of increased livestock numbers and nontraditional (e.g. Middle East, Asia, Mexico, California, Florida) markets because of weather-related problems (e.g. persistent drought) and/or irrigation restrictions in the potential hay importing regions;
- Identifying opportunities to:
 - Partner with other agricultural groups;

- Create relationships and/or partnerships with some of the key government policy makers in importing countries and with importers in those countries;
- Establish stronger partnerships with government officials (e.g. Canadian trade officers and consulate officials) and selected private sector leaders;
- Identify new markets that Canadian producers and exporters can feasibly supply on an ongoing basis;
- Educate producers about what exporters and customers in importing countries want;
- Explore opportunities to develop one or more Value Chains; and
- Work with equipment manufacturers, the Prairie Agricultural Machinery Institute and others to encourage producers to convert to square bale production.
- Develop “green” building products using forages including:
 - Insulation;
 - Structural building materials;
 - Composites (possibly a combination of new and recycled material);
 - Clothing;
- Use forage to transfer nutrients (especially Phosphorus) from areas of excess to areas of shortage; and
- Create improved returns for cattle producers, which would create more demand for forages, by establishing successful local slaughter plants that would have a positive impact on the economics of raising and finishing cattle in Manitoba. If these plants were able to handle multiple species that would also have positive impacts for sheep/bison/elk profitability and, in turn, for forage demand. Possibly involve the MCEC in these discussions through their Strategic Planning process.

3. Strategic Solutions to Influence Policies:

The Manitoba Forage and Grassland Industry works with like-minded groups including other provincial/regional forage industries; Manitoba Cattle Producers; Keystone Agricultural Producers; and others, to influence policy development. Some of the Opportunities for improved policies include:

- Improve compensation for wildlife damage to hay supplies and standing grass;
- Increase/support grazing clubs and include grain producers;
- Integrated pest management involving all affected parties (RMs, railways and landowners);
- Improve regulations – encourage the use of more “carrot” and less “stick”;
- Improve extension efforts to promote improved grazing and forage utilization techniques and to improve cattle/bison/elk/sheep profitability through establishment of additional Manitoba processing facilities (e.g. regional slaughter plants);

- Encourage policies that promote innovation and create incentives for better management (e.g. EG&S, rather than punitive regulations) (i.e. on Crown Lands, and on private land);
- Promote forages' role in sustaining small family farms including livestock;
- Improve financial encouragement and support to farmers for Ecological Goods and Services (EG&S) programs;
- Ensure that the transition from one program to another is smooth with no lag time between (e.g. CAIS, APF, Growing Forward);
- Form a national organization that could influence policy development at the national level;
- Persuade the provincial government (i.e. MAFRI) to provide basic operating funding and/or staff support for the Manitoba Forage Council; and
- Form a charitable foundation that would provide funding for forage research and other initiatives to promote the Manitoba forage and grassland industry.
- Open up access to the electric grid for small scale "green" energy producers and pay higher than hydro rates;
- Establish long-term, stable, science-based support programs for environmental and public good benefits;
- Re-prioritize extension services and ensure it is given adequate funding;
- Ensure there is adequate support for grazing clubs and demonstrations;;;
- Ensure that producer organizations receive adequate funding and resources to participate in policy development;
- Eliminate red tape as much as possible related to government support programs;
- Provide funding for market development of hay markets;
- Overhaul forage crop insurance program to create incentives to produce higher quality and higher value forages;
- Support independent, publicly funded research (not good to have too much research funded by chemical companies);
- Develop a national forage organization to support the development of better policies (e.g. U.S. border issues, overseas markets);
- Support cost of fencing and related infrastructure to support rotational grazing;
- Allocate additional resources to improving the management and carrying capacity of provincial crown lands; and
- Consider a check-off to support research.

Who will be the Champion?

There is a need for one or more strong policy development organizations to represent the interests of the forage and grassland industry. Often this coordinating role is filled by the

Manitoba Forage Council (MFC). Sometimes MAFRI or the Keystone Agricultural Producers (KAP) will take a leading role.

Whichever organization fulfills this need (and it is a critical need), there must be sufficient, sustainable and predictable funding in place for its/their support. Therefore, the Manitoba industry should explore all potential funding options including possible check-off opportunities, the formation of a charitable foundation, increased basic operational funding and/or secondment of staff from the provincial government (MAFRI), partnerships among organizations and other possibilities to ensure that effective policy development occurs to support and improve research and promotion of:

- The benefits of maintaining grasslands, including the Ecological Goods and Services created;
- New innovative uses (e.g. biomass energy, nutraceuticals, etc.) of forage legumes, grasses and crop residues;
- New agronomic practices and varieties to improve yields and quality of forage produced, lengthen stand life, improve winter hardiness, reduce fertilizer needs, etc.;
- Sustainability benefits of developing agriculture production systems that combine forage, livestock and grain production;
- The many benefits of forage production including those related to Ecological Goods and Services;
- Extension support for grazing clubs and in-field activities; and
- Improved profitability and long-term sustainability of the sector.

4. **Transportation, Infrastructure and Logistics Strategic Solutions:**

Reduce transportation costs and create new opportunities through increased efficiency, improved transportation and infrastructure, including:

- Multi-party, collaborative approaches to solving problems including:
 - Work with the Transport Institute to develop systems that will encourage companies and railways to move containers to inland locations for transport of forages via Vancouver and Montreal to export destinations. This needs to dovetail with production of steady, adequate volumes of high quality hay and penetration of export markets;
 - Continue to work with the Churchill Gateway Development Corporation to develop opportunities to use the port of Churchill for hay exports;
 - Harmonize freight policies with the U.S.;
 - Address differences in infrastructure between Canada and competitive exporting countries;
 - Identify additional infrastructure that Canada needs to enable it to be a leader in supplying forage to international markets;

- Encourage partnerships between agribusiness and producers to work toward common goals;
- Develop consistent quantities of good quality forage for export markets;
- Develop a huge commercial dryer for export hay markets;
- Coordinate all links in one or more forage Value Chains;
- Pursue the development of biofuels produced from forage and crop residues; and
- Develop CFIA approved mobile slaughtering facilities to support niche market livestock markets;
- Encourage foreign investment in Manitoba's forage processing industry. Foreign companies located in large export markets are interested in investing in the Manitoba industry to ensure their future forage supplies – they have invested in other forage production industries;

5. **Education Strategic Solutions:**

Educate students, the general public and policy makers by working with industry partners (e.g. the Glenlea Farm Education Centre, Agriculture in the Classroom, etc.) regarding:

- Forages role in improving soil health and in improving the sustainability of crop rotations and farm practices;
- The need for research to quantify and optimize the benefits that forages and grasses can provide;
- Manitoba's clean air/water benefits of forage (Omega-3, CLA for meat, eggs, milk/cheese, etc.);
- Support "Ag in the City" and other education programs aimed at youth and urban residents;
- Use local mainstream media to help promote forages and their uses and health benefits;
- Provide solid information to promote forage benefits and enlist support of other organizations to educate consumers including:
 - Canadian Food Inspection Agency (CFIA);
 - Manitoba Cattle Enhancement Council;
 - Provincial and national consumers organizations;
 - Dieticians;
 - Other stakeholder and interest groups including dairy, beef, bison, elk, sheep, commodity groups;
 - Ag in the Classroom and Red River Exhibition; and
 - Universities and schools.

8.6 Appendix 6 – Manitoba Forage and Grassland Strategic Workshop Participants

8.6.1 Manitoba Forage and Grassland Stakeholders Committee Members

Name	Attended (Yes/No)	Area or Organization Represented
Alan Carson	Yes	Manitoba Agriculture, Food & Rural Initiatives (MAFRI) - facilitator
Chris Kletke	Yes	Hay Marketer
Curtis Rempel	No	Richardson Center for Functional Foods and Nutraceuticals
Dale Timmerman	Yes	Agriculture & Agri-Food Canada-Agri-Environmental Services Branch (formerly Prairie Farm Rehabilitation Agency)
Eric Thornhill	Yes	Manitoba Sheep Association
Fraser Stewart	No	Former MAFRI Forage Specialist
Gary Halwas	Yes	Hay Processor
Glenn Friesen	No	MAFRI Business Development Specialist - Forage
Greg Johnson	Yes	Manitoba Cattle Producers Association
Ian Wishart	Yes	Keystone Agricultural Producers - speaker
Jim Lintott	Yes	Forage Fed Beef Association/Manitoba Forage Council
Dr. J.C. (Kees) Plaizier	Yes	University of Manitoba Dairy Science
Ken Gross	Yes	Ducks Unlimited
Kim Ominski	No	University of Manitoba Animal Science
Larry Black	Yes	Dairy Farmers of Manitoba
Shannon Scott	Yes	Agriculture and Agri-Food Canada (AAFC)
Wayne Digby	Yes	Manitoba Forage Council

8.6.2 Other Worship Attendees

Name	Area or Organization Represented
Alan Ransom	Farm Stewardship Association of Manitoba (FSAM)
Wanda McFadyen	Farm Stewardship Association of Manitoba (FSAM)
Bill Gardiner	Manitoba Agriculture, Food & Rural Initiatives (MAFRI)
Brian Anderson	Manitoba Agriculture, Food & Rural Initiatives (MAFRI) - facilitator
Brian Sterling	Manitoba Agriculture, Food & Rural Initiatives (MAFRI) - facilitator
Bob Ward	Manitoba Agriculture, Food & Rural Initiatives (MAFRI) - presenter
Cam Hamilton	Hay Marketer
Carl Cunningham	Beef Producer
Carl Havixbeck	Producer
Charles Tavenor	Producer
Christine Rawluk	University of Manitoba Animal Science
Clayton Robins	Agriculture and Agri-Food Canada (AAFC) Researcher
Dan Macdonald	Agriculture and Agri-Food Canada (AAFC)
Dan Wuerch	Agriculture and Agri-Food Canada (AAFC)
Dwayne Summach	Manitoba Agriculture, Food & Rural Initiatives (MAFRI)
Ed Newfield	Hay Marketer
Felix Boileau	Beef Producer
Glen Campbell	Beef Producer
Gordon Leathers	Media
Hans Borst	Dairy Producer
Hector Urbina	Agriculture and Agri-Food Canada (AAFC)
Henry Nelson	Sheep Producer
Hushton Block	Agriculture and Agri-Food Canada (AAFC) Researcher
Jake Heppner	Producer
Jane Thornton	Manitoba Agriculture, Food & Rural Initiatives (MAFRI)
Jenelle Hamblin	Manitoba Agriculture, Food & Rural Initiatives (MAFRI) - facilitator
Juanita Kopp	Manitoba Agriculture, Food & Rural Initiatives (MAFRI) - facilitator
Ken Harms	Hay Marketer
Ken Wright	Beef Producer
Larry Fischer	Manitoba Agriculture, Food & Rural Initiatives (MAFRI)
Lavonne Kroeker	Manitoba Agriculture, Food & Rural Initiatives (MAFRI) - facilitator
Leanne Brackenreed	Manitoba Rural Stress Line
Linda Sprung	Manitoba Agriculture, Food & Rural Initiatives (MAFRI) - facilitator
Lindsay Coulthard	Beef Producer
Lloyd Atcheson	Beef Producer
Lorne Rossnagel	Beef Producer
Marie Haynes	Biomass Energy Producers
Matt Wiens	Manitoba Agriculture, Food & Rural Initiatives (MAFRI)
Meghan Sprung	Manitoba Agriculture, Food & Rural Initiatives (MAFRI) - facilitator
Mike Kagan	Manitoba Agriculture, Food & Rural Initiatives (MAFRI)

Name	Area or Organization Represented
Muriel Tavernor	Producer
Norman Beckman	Beef Producer
Pam Iwanchysko	Manitoba Agriculture, Food & Rural Initiatives (MAFRI) - facilitator
Paul Jefferson	Prairie Agricultural Machinery Institute Researcher
Perry Koss	Beef Producer
Randy Beidler	Beef Producer
Randy Eros	Sheep Producer
Rene Mabon	Brett-Young Seeds
Roger Haynes	Biomass Energy Producers
Roger Sheldon	Manitoba Agriculture, Food & Rural Initiatives (MAFRI) - facilitator
Ryan Canart	Upper Assiniboine River Conservation District
Shawn Cabak	Manitoba Agriculture, Food & Rural Initiatives (MAFRI) - facilitator
Tim Clarke	Manitoba Agriculture, Food & Rural Initiatives (MAFRI) - facilitator
Tracy Gilson	Manitoba Agriculture, Food & Rural Initiatives (MAFRI) - facilitator
Trent Nowosad	Northstar Seeds Ltd.
Willy Nayet	Producer