

Forage Focus

March 2009

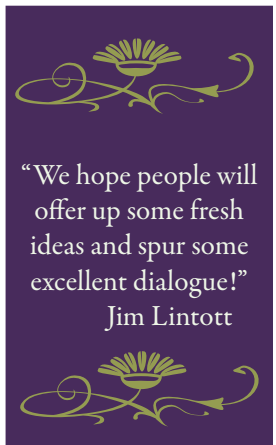
Forage & Grassland Plan Underway

Since its inception almost 20 years ago, the Manitoba Forage Council, along with many other partner organizations has strived to initiate and administer projects that help forward the forage and livestock industry in our province. "These research and technology projects tend to be on a 'project by project' basis, with project suggestions coming from the Board, producers, and our industry and government partners," commented Wayne Digby, Executive Director, Manitoba Forage Council. "It's time to examine the needs of the industry as a whole and ensure that we have an 'integrated partner' approach to address these needs."

There are several key issues that are forcing us to examine our existing methodology. Firstly, the demand for hay and hay products has broadened, creating new opportunities for our forage processors as well as challenges in terms of shipment. Secondly, environmental concerns. Proper management of land, water and nutrients continues to have an impact on the economics and sustainability of the farm operation. Thirdly, niche products such as organic hay, beef and milk have caught consumer interest, creating new needs for the Manitoba forage/livestock industry. And fourthly, the appeal to grow forage will increase if forage can be used for biomass fibre and energy production.

"To move the process forward, we are hosting a workshop on April 8th in Portage la Prairie," says Digby. The plan is to have at least 75 people who represent all aspects of the industry come to the table to discuss how to work together as an industry and move it forward. "We want a cross section of people from industry, government, university, researchers, processors, extension workers, environmentalists, cattle producers, forage growers, entrepreneurs, etc. to come to the workshop, say what their needs are and help identify possible solutions."

According to Jim Lintott, Chair of MFC, "we would also like to look at some novel ideas at this meeting. We hope people will offer up some fresh ideas and spur some excellent dialogue!" One suggestion Jim has is for producers to swap land bases to manage the phosphate and nitrogen in the soil. "Why couldn't a hog farmer and a forage grower plant crops on each other's land to improve the soil tilth, moisture retention, and minimize diseases?" he asks. His reasoning is this: plant alfalfa on grain land high in phosphate to utilize the phosphate and increase the nitrogen content. After 3 - 4 years it could be plowed under, leaving the root mass and a lot of nitrogen. While some pastureland may not be suitable for seeding to rejuvenate the land, perhaps a reasonable rental agreement can be worked out. "This is just an idea - and some economic modeling would have to be done - but hey, maybe it's a direction the industry is looking at going!" (continued on next page)



Funding from the Manitoba Rural Adaptation Council, Manitoba Agriculture, Food and Rural Initiatives and the Manitoba Forage Council has facilitated the retention of Kelwin Management Consultants to create an action plan for our industry.

Kelwin Consultants will analyze the Manitoba Forage Industry Profile, (statistics from the industry), facilitate this workshop, consult with industry representatives, and develop a detailed action plan which will identify our goals and the steps needed to integrate the industry through initiatives and partnerships.

If you would like to attend, please contact MFC at (204) 726-9393 or mfc@mbforagecouncil.mb.ca by March 31st.

Wayne's Clippings

The last few months have been very busy as we have strived to provide you with well rounded programs and services.

A great big thank you to all of our partners who have worked with us in providing the various conferences, workshops and seminars. Although many different organizations are involved in providing support for these events the partnership with MAFRI staff is special. A big thank you to the many MAFRI staff who have been involved in organizing these events.

The Manitoba Forage Council represents the forage industry in many different areas. Recently some of the areas that we have provided input on include:

Forage and Pasture Crop Insurance – two recent meetings with Manitoba Agriculture Services Corporation (MASC Crop Insurance) allowed the MFC Directors and I the opportunity to provide input on forage and pasture insurance programs. A few of the areas identified that MASC will be following up on include:

- Investigating the potential of increasing the hay program probable yields by determining the yields of “second cuts not taken” - possibly based on animal units and days grazed.
- Considering the issue of separating hay types (alfalfa, alfalfa/grass mixtures, grasses) for claim payment purposes.
- Reviewing the issue of considering hay management practices, such as age of stand, when assigning coverage and/or insurance eligibility.
- Considering compensation for swath grazing and/or bale grazing damage by wildlife.
- Reviewing the option of accepting reported yields from non-insurers into probable yields and historic yields into coverage for new growers.
- Reviewing the option of adding additional regional transportation costs into hay values in the event of hay shortfalls.

BMPs (Beneficial Management Practices) for the Manitoba Sustainable Agriculture Practices Program (MSAPP)

- The main objective of this workshop was to provide input into climate change programs.

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Board News

Certified Weed Free Hay and Straw

There is a growing demand for hay and straw in the U.S. that is certified weed free. MFC is working with Manitoba Agriculture Services Corporation (MASC) to develop a Certified Weed Free Hay and Straw Program to provide inspection and certification.

As noted previously, we are now working on the development of a provincial Forage & Grassland Industry Strategy. Working through this planning process is an exciting opportunity for all of us to take a look at the issues, challenges and opportunities in the forage area and put in place specific actions to move ahead. Your input is important! On April 8th please join our planning workshop in Portage La Prairie and voice your thoughts. This FREE workshop will be held in conjunction with the MFC Annual General Meeting. Plan to Attend!

Call me at (204) 726-9393.

Wayne Digby



Wayne Digby, Exec. Director

Membership Renewals

It's that time of year again! Please renew your \$40.00 membership fee as soon as possible.

Membership Benefits:

- quarterly newsletters (16 pages jam-packed with updates on recent forage & livestock research projects, industry information, hay markets, upcoming events & more);
- invitations to attend and participate in forage, hay, & dairy marketing events such as World Dairy Expo and the Mid West Horse Fair, Provincial Pasture Tour & Grazing Club Meetings;
- invitations to attend the Manitoba Grazing School in Brandon & the Manitoba Forage Symposium;
- invitations to attend forage & livestock research demonstrations around the province;
- opportunity to express views on forage and livestock policy and have the Council lobby on your behalf;
- opportunity to identify and suggest research projects that are of benefit to you and other Manitobans; and
- significant discounts for conferences.

Those who have attended the 2008 Manitoba Grazing School have had a portion of their conference fee allocated to membership. Contact Corie Arbuckle (204) 254-4192 to obtain your membership number for future conference registrations. Spouses/immediate family members (*living in the same house*) of a current MFC member are entitled to register for conferences at the discounted conference rate.

Go to: www.mbforagecouncil.mb.ca or mail cheque to: MFC, 125 Patterson Cres., Brandon, MB R7A 6T7

Strategy Workshop & AGM

April 8, 2009

Portage la Prairie, MB

9:30 to 4:15

FREE

Play a role in the future of the forage & grassland industry.

Call: (204) 726-9393 or mfc@mbforagecouncil.mb.ca to register.

Interested in joining the Board of Directors? Contact Wayne Digby at (204) 726-9393.

Interested in Producing Grass Fed Beef?



The Manitoba Grass Fed Beef Producers Association is 'beefing up' their production!

"Due to a steady interest in our product, we now feel we can add some members to our association and step up our production," says Jim Lintott, Chair of the Association. "We've been working really hard to market our products and build a consistent customer base and it appears that people are quite interested in grass fed beef!"

The grass fed beef must meet certain protocol to ensure a safe, reliable product is marketed. All the beef sold has been produced without hormones, antibiotics or animal by-products and is processed at a butcher plant in Beausejour. Only young cattle are used and the meat is hung for a period of 21 days.

To date, the focus has been on developing markets 'direct to home' and to restaurants. They have met with great success selling frozen product at three Farmer Markets; Red River Exhibition, St. Norbert Market Garden and Pine Ridge Hollow. "There has been no adverse reaction to frozen products, even high end strip loin steaks," commented Lintott. "This is great because there's a long stretch over the summer when we're not slaughtering any." For further information or to purchase beef go to: www.manitobagrassfedbeef.ca

Contacts: Jim Lintott (Production): (204) 444-2514, e-mail: jclintott@highspeedcrow.ca

Bragi Simundsson (Membership): (204) 376-2369, Paula Havixbeck (Sales): (204) 299-6932.

Also check out the Manitoba Forage Council website for information on producing Grass Fed Beef <http://mbforagecouncil.mb.ca/grassfedbeef/default.aspx>



MFC Reports


Looking for a New Variety?

Yield and hardiness ratings below!


The Manitoba Forage Crop Committee, MFCC, (an organization made up of both government and private industry stakeholders) continues to test new forage varieties in Manitoba and provide recommendations to the CFIA-Variety Registration Office. The MFCC also tests registered varieties for yield, quality and winter hardiness in Manitoba.

Manitoba Alfalfa Data


Variety	Root Type	Winter Hardiness	Supplier
Able	taproot	2.9	Pickseed Canada
AC Caribou	taproot	1.9	BrettYoung
AC Longview	taproot	2.9	BrettYoung
Algonquin	taproot	2.1	Public Variety
Apica	taproot	2.3	S.S. Johnson Seeds
Beaver	taproot	2.1	Public Variety
Gala	taproot	2.7	Viterra/Proven Seed
HayGrazer	Branched	3.5	Northstar Seed Ltd.
Heinrichs	Creeping	2.1	Viterra/Proven Seed
Multi5301	Taproot	2.9	Interlake Forage Seeds/Deldenburg Inc.
Quatro HR	Taproot	2.6	Pickseed Canada
Rangelander	Creeping	2	SeCan



Winter hardness trial showing winter injury on variety in centre



Two winter injury ratings shown. 1=best, 5=worst.



WINTER INJURY CLASS 5

Manitoba Forage Crop Committee is an organization made up of both government and private industry stakeholders. Our purpose is to test new forage varieties in Manitoba and provide recommendations to the CFIA-Variety Registration Office on which ones should be considered for registration. The MFCC also tests registered varieties to make usable Manitoba data available to Manitoba farmers. Our focus is to test for yield, quality and winter hardiness in the Manitoba environment.

2008 Manitoba Annual Forage Data

Barley						
Variety	% of Ronger	Yield (kg/ha)	RFVN	CP%	TDN%	Supplier
AC Ranger	100	10380	141	11	65	Public Variety
Bacon	95	9826	136	11	65	SeCan
Birscarth	98	10175	126	11	64	Wagon Wheel Seed Corp.
CDC Cowboy	100	10416	136	11	64	SeCan
Champion	107	11128	154	11	66.46	Viterra/Proven Seed
Sommerville	84	8687	146	11	65.51	Hyland Seeds
Stockford	98	10203	128	10.75	63.85	Viterra/Proven Seed
Trochu	91	9441	152	10.25	66.26	SeCan
Vivar	94	9779	143	10.5	65.56	SeCan
Xena	95	9876	143	10.75	64.94	Viterra/Proven Seed

Oats						
Variety	% of Ronger	Yield (kg/ha)	RFVN	CP%	TDN%	Supplier
AC Assiniboia	81	8402	114	10.5	62.25	Canterra/Viterra
AC Jordan	96	9857	105	10.25	61.75	SeCan
AC Ranger	100	10112	135	10.5	64.5	Public Variety
CDC Bell	107	11037	100	10.25	60.75	SeCan
Mustang	90	9269	100	10.25	60.5	Public Variety
Pinnacle	89	9210	104	10.25	61	FP Genetics
Triple Crown	96	9920	97	10	60	FP Genetics

Triticale						
Variety	% of Ronger	Yield (kg/ha)	RFVN	CP%	TDN%	Supplier
AC Ranger	100	9982	145	9.56	64.92	Public Variety
Tyndal	77	7684	115	11.08	62.06	SeCan
Barjo	96	9604	110	10.05	60.65	Public Variety
TR-195	81	8108	107	10.73	61.4	SeCan
Bunker	85	8441	106	10.97	60.53	FP Genetics

Alfalfa Winter Hardiness Testing

Yield and winter hardiness are the two most important traits when choosing a variety for Manitoba. The winter hardiness test used by MFCC uses a protocol approved by the North American Alfalfa Improvement Conference to provide a quick and accurate assessment of alfalfa winter hardiness. The method: 25 seedlings of each new variety are planted in a row, in four randomized replications, on two sites in Manitoba. A few months after transplanting the seedlings, an aggressive mowing regime begins. The plants are mowed repeatedly throughout the summer to inflict abnormal levels of stress with the purpose of reducing plant vigor. The live plants are distinguished from those that did not survive the summer mowing regimes. The next spring the plants that survived the previous fall are re-evaluated to rate the vigor and symmetry of growth of each plant. This method ensures distinguishable separation in one year and provides an estimation of the variety's ability to survive in Manitoba. In this test, varieties are compared against known check varieties: 1=most hardy, and 5=least hardy.

Forage Quality Testing

When testing new varieties MFCC realizes that yield is not the only important trait considered. Thousands of dollars are spent every year testing for Relative Feed Value (RFV), Crude Protein (CP), and Total Digestible Nutrients (TDN). MFCC also uses a formula that takes yield, quality, and digestibility into account and provides the expected beef pounds per acre.



Don't Quit

- Anonymous

*When things go wrong,
as they sometimes will,
When the road you're trudging seems
all up hill,
When the funds are low and the debts
are high,
And you want to smile, but you have
to sigh.
When care is pressing you down a bit,
Rest! if you must; but don't you quit.*

*Life is queer with its twists and turns,
As everyone of us sometimes learns,
And many a failure turns about,
When he might have won had he
stuck it out.
Don't give up, though the pace seems
slow,
You might succeed with another blow.*

*Often the goal is nearer than it seems
to a faint and faltering man,
Often the struggler has given up,
When he might have captured the
victor's cup.
And he learned too late, when the
night slipped down,
How close he was to the golden crown.*

*Success is failure turned inside out,
The silver tint of the clouds of doubt,
And you never can tell how close you
are,
It may be near when it seems afar.
So stick to the fight when you're
hardest hit,
It's when things seem worst that you
mustn't quit.*



Beef and Forage Days

Celebrating another great opportunity to learn!

by: Juanita Kopp, Farm Production Extension Specialist – Beef, MAFRI

The 2009 Beef and Forage Days have come and gone and this year's five day extravaganza was a success. Overall, 700 producers came out to hear a number of very good presentations. There isn't a lot of positive talk in the beef industry but Scott McKinnon, Market Analyst from Canfax had some good news. He thinks that due to the low cow numbers in both Canada and the U.S., calf prices should be on the up-swing this coming fall.

Another highlight from this year's presenters was Darrell Busby, Iowa State University Extension Beef Specialist. He gave a very interesting presentation on 25 Years of Finishing Cattle Research: the Tri County Steer Carcass Futurity. He also presented the finishing and carcass evaluation results from the Manitoba cattle that were sent to his research facility. A full report regarding the Manitoba cattle is available from MAFRI.

As well, Rodger Sheldon of MAFRI - Farm Production Extension – Grazing & Pastures, from the Ste. Rose du Lac office gave a summary of a number of years of valuable on farm demonstrations to extend your grazing season. The event evaluations showed that his presentation was very well received.



Meet the Exhibitors

Beef & Forage Days is also a great place to catch up with your sales rep - one on one! According to Kim Van Cauwenberge, the Beef & Dairy Nutrition Support Rep for Feed-Rite, "it's an opportunity to find out what's new and get your questions answered right away."

Kim worked the Holland seminar and found herself answering lots of questions - even for existing customers. "I often had several producers at my booth at the same time. One question would lead to another and we had some great discussions going. I think it was very helpful to everyone."

Symposium Synapsis.....

After a one year absence, forage growers gathered at the Forage Symposium south of Winnipeg, in Morris, Manitoba to gain some insight into a number of issues. Here's a brief overview of a few speakers.

Ed Shaw, International Quality Forage and Feed Inc., provided information on the state of the international forage markets and the impact that the recession is having on global credit. Banks are not recognizing bank's letters of credit from another country, therefore non-payment issues are moving to the forefront. He also noted that the tumbling price of milk in the U.S. is having a major impact on dairy producers. This is causing cash flow issues and softening the dairy hay market. Recession has also resulted in horses being abandoned (turned loose) on U.S. grazing reserves (crown land) because their owners cannot afford to purchase feed and the U.S. law prohibiting slaughter of horses, has reduced hay demand in the horse market. As well, feed stores are going bankrupt – he outlined a story of two feed stores in Colorado closing their doors due to substantial declines in business and increased accounts receivables and bad debt.

Participants also were engaged by Bill Drew's vision for developing Churchill as a provider of forages to the world. Drew, Executive Director of the Churchill Gateway Development Corporation shared his thoughts regarding rail and water transportation development out to the Port of Churchill.

John McGregor provided a great summary of 14 years worth of data on using various tools to predict hay quality prior to harvest. For more information, contact John at MAFRI, (204) 371-1759.



Bill Drew, Executive Director, Churchill Gateway Development Corporation.

Numbers of Note

e-hay Weekly, February, 17, 2009

5 – states (South Carolina, Georgia, Texas, California, Hawaii) with areas in extreme drought, according to the U.S. Drought Monitor.

164 – \$/ton price for the top-selling hay load at last week's Dodge Council Forage Council quality-tested hay auction in Beaver Dam, WI. For all the sale results, go to www.widcfc.com.

100,000 - horses being abandoned at horse auctions or “dumped” onto public lands nationwide due to high hay/feed prices and the bad economy, according to Utah state senator Dennis Stowell. The Utah State Legislature is considering a resolution calling on the U.S. Congress to discontinue work on a bill making it illegal to send horses to other countries for slaughter.



Grazing School Marks 11th

The Manitoba Grazing School was held for its eleventh consecutive this year on November 25th and 26th at the Keystone Center in Brandon, Manitoba. 260 participants came not only from Manitoba, but also from Saskatchewan, Alberta, Ontario, Quebec and North Dakota.

Four major keynote speakers and two-break out sessions (involving four different topics) were offered to the students as well as 35 commercial displays from agri-businesses and government. Post session evaluations indicated a high interest in the presentation by Doug Gunnink, 'Why Grass-Fed is the Best!' and Wendy Mesley, 'The Truth is out There.'

Doug Gunnink's presentation engaged the audience as he relayed how they raise Grass Fed Beef. His presentation focused on raising high quality forage and what characteristics to look for in grass to be able to translate that over to high quality beef.

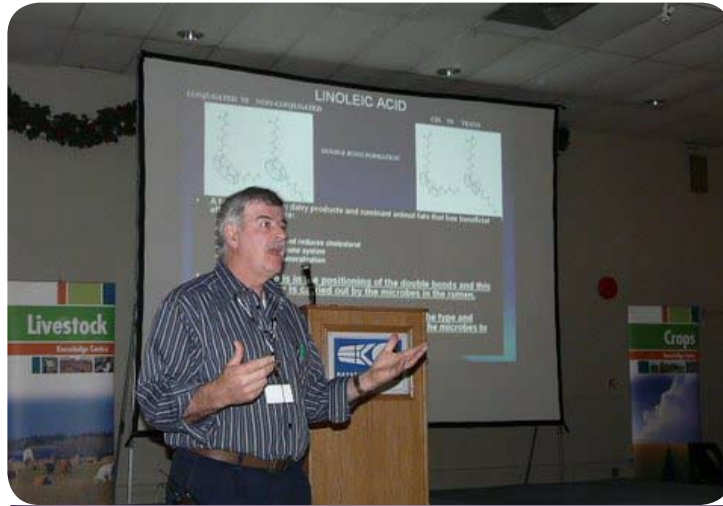
Wendy Mesley, famous for her role on CBC's The National and Marketplace gave insight into the views of consumers. Her presentation focused on Canadian food products that were labeled "Product of Canada" but were not really produced in Canada. She relayed how urban consumers are losing touch with where their food really comes from and how important buying local is.

Time was also set aside to entertain the audience from a non-agricultural perspective – renowned pianist Martin Jonovsky, originally from Prague, the Czech Republic, provided a high-energy performance.

One evaluator made this comment, "The outstanding piano entertainment was such a treat for this country kid."

The conference also featured some practical applications for your business. Workshops on business modeling, bale grazing, winter watering systems, transitioning to organics and calculating stock rates were just a few of the seminars meant to deliver knowledge to those interested.

A producer panel consisting of four young Manitoba producers addressed the topic 'Doing the Right Things Right!' The members were: Jonathon Bouw – Dugald, (purebred Angus cattle, forage-finished beef and organic production), David Gall – Moosehorn, (380 head cow/calf operation of Charolais-cross cows), Joe Bouchard - Fisher Branch,



Doug Gunnink.



Wendy Mesley, CBC.



Events Review

Successful Year

(cow-calf operation, marketing strategies such as auction marts, off the farm and internet), and Ryan Boyd – Forrest, (mixed farm consisting of 2000 acres of cropland, 1000 acres of tame forage and 120 Angus commercial cows). They discussed their succession plans, their progression and how they have changed paradigms on their farming operations.

Evaluations suggested that producers are interested in what they had to say: “Producer panel is excellent. More idea-sharing like this should happen at Grazing School.”

“I enjoyed the four young farmers who spoke about their farming practices. I especially noticed the attention that was given to them by the elder farmers and their curious questions they asked the young men. It was nice to see how the respect to the new idea was received and how the curiosity was peaked.”

Graziers of the Year

Congratulations Alfred & Maureen Epp of Boissevain, Craig and Lorna Marr of Alonsa, & Mike & Tara Slepicka of Minitonas.

The recipients selected at this year’s Grazing School have shown true innovative spirit and accomplishment.

A characteristic of an excellent grazier is his or her ability to identify ways to improve their business and the fortitude to carry out those changes within their operation. Learning new techniques, whether at school, tours, workshops or from a neighbour provides ideas that may or may not work for your business. All three winners have these qualities within and have worked extremely hard to incorporate concepts in their management to improve grazing and livestock efficiency, improve their land base and improve their bottom line.



Left to right: Alfred & Maureen Epp, Craig & Lorna Marr, Mike & Tara Slepicka.

Grazing School

Sponsors

Platinum

- Agricultural Sustainability Initiative
- Prairie Farm Rehabilitation Administration
 - MAFRI
- MB Cattle Producers Association
 - MFC
- Managing Risk Education Program

Gold

- Manitoba Rural Adaptation Council
- Western Farm Leadership Council

Silver

- MacDon Industries
- Northstar Seed
- Manitoba Cooperator

Bronze

- Cattlex Ltd.
- Central Testing Labs Ltd.
- Dairy Farmers of Manitoba
 - Gallagher Animal Management Systems
 - MB Cattle Enhancement Council
 - TD Canada Trust
- Graziers of the Year
 - Feed-Rite
- Kane Veterinary Supplies

Hospitality Sponsors

- Royal Oak Inn & Suites

Forage Producers Scheduled to Visit Florida and Kentucky

By: Jane Thornton, MAFRI

The Manitoba Forage Council obtained funding this year through Manitoba Agri-Ventures Initiative (MAVI) to explore the horse hay market in Florida and Kentucky. In cooperation with Churchill Gateway Development Corporation, the delegation will be traveling to Florida and Kentucky on March 22nd to 28th, 2009.

Florida and Kentucky are the United States' largest thoroughbred breeding and racing states. Florida's horse industry is further diversified by winter training and showing facilities for most disciplines. The Florida horse industry generates a \$6.5 billion economic impact on the GDP each year when including the spending by industry suppliers and employees, and produces goods and services valued at \$2.2 billion.

While these two states have very large horse populations and good pasture, their ability to produce and store high quality hay is quite limited. The cool season forages of western and northern North America are highly sought after as horse feed. Manitoba may have a unique advantage through the port of Churchill to ship hay and grain by sea to the

eastern seaboard of the United States. This mission seeks to determine the product requirements, the feasibility of shipping overland and by sea, and to establish lasting contacts with industry leaders and companies.



Understanding Roundup Ready® Alfalfa

By: Dr. Dan Putnam, University of California and Dr. Dan Undersander, University of Wisconsin

A number of concerns have been raised about the release of Roundup Ready (RR) alfalfa, the first biotech trait in alfalfa. Many of these concerns have been fueled by misinformation. In this article, we provide a scientific perspective on these concerns that we hope will inform.

Concern 1. Once you release this gene – you can't call it back.

Over 300,000 acres of RR alfalfa have been planted for hay over the past 2 to 3 years, with a limited amount planted for seed. The real question is whether you can continue to plant conventional alfalfa seed and the answer is a resounding 'yes' – all of the seed currently for sale is 'conventional' – and you only need to test it (or ask the seed company to test it) with inexpensive test strips to make sure it does not contain the gene if you don't want it. Conventional alfalfa seed will continue to be available after Roundup Ready alfalfa is released.

Concern 2. Won't contamination from neighboring fields result in all seed being Roundup Ready, eventually?

No. Seed production methods and isolation distances currently recommended by seed companies should keep adventitious (unintended) presence at a very low level in non-GE seed. A gene will increase in a population only if the new gene gives the plant an advantage over other plants and the conditions creating the advantage are consistently present. Conversely, if plants are grown in an

Coming Events

environment where the gene provides no advantage, the gene is more likely to remain in the population at very low levels or to be lost from the population. The formulas for computing these changes in gene frequency can be found in most books on population or quantitative genetics, such as Falconer and MacKay, 1996, *Introduction to Quantitative Genetics*, Longman Press. Thus non-GE seed will always be available.

Concern 3. Won't my neighbor's Roundup Ready hay fields contaminate my conventional or organic alfalfa hay production through pollen and gene flow?

No. There is almost zero probability of gene flow among hay fields. For this to happen all the following must occur:

- fields must flower at same time.
- Insects (primarily bees) must be present to move pollen (it does not blow in wind).
- plants must remain in field 4 to 6 weeks after flowering for viable seed production.
- seed must shatter, to fall to ground and establish on soil surface.
- seedlings must overcome autotoxicity to germinate.
- seedlings must overcome competition from existing plants.

Pollen moves among alfalfa plants only when carried by pollinators such as bees, and honey bees generally do not like to pollinate alfalfa and prefer other plants. Alfalfa seed takes many weeks after flowering to mature sufficiently to germinate and longer to shatter and fall onto the ground. Alfalfa grown for hay is typically cut too frequently for this to occur. In the off chance some seed is produced, alfalfa seed does not readily spread, e.g. by wind. Alfalfa does not germinate well on the soil surface. Germination will be further reduced by alfalfa autotoxicity (chemical from existing alfalfa inhibiting new alfalfa seed germination and growth) from existing planting in the hay field (this is why interseeding alfalfa to thicken a stand generally fails). Germinating seeds must compete with established plants for water, nutrients and sunlight. Data has shown that interseeded plants generally die during the first growing season. Thus, if a grower takes care to plant conventional seed, it is very unlikely that the Roundup Ready gene will move to their hay fields. (See *Gene Flow in Alfalfa: Biology, Mitigation, and Potential Impact on Production*, Special Publication of the Council for Agricultural Science and Technology (CAST) at <http://www.cast-science.org/displayProductDetails.asp?idProduct=157>)

Concern 4. Will the seed companies be able to keep seed from being contaminated?

Yes, the greatest real potential for pollen flow and contamination is during seed production. The seed industry has agreed on a field tagging procedure in areas where RR alfalfa seed will be grown so neighbors and other seed companies will know where RR seed is being produced. 30% or more of total seed production is produced by seed production companies for export and must be non-GE alfalfa seed; thus it is in the seed companies' own best interest to control seed production to continue to produce the non-biotech seed. This large volume of export seed production is much more significant economically to the seed industry than the less than 1% of total seed market for organic seed production. However, concerns and methodology for exported seed will make non-biotech seed available to organic and other growers indefinitely.

Concern 5. Won't feral alfalfa be a source of contamination?

Feral (wild growing) alfalfa can act as a bridge for moving genes from one seed field to another, and thus should be controlled to prevent gene flow in any area where seed production occurs, whether biotech or not. Feral alfalfa is primarily an issue in portions of Western states because little occurs elsewhere. Feral alfalfa will have low seed production for the reasons described in #3 plus damage from lygus bug and infection from seed-borne fungi when seed develops under damp conditions. Seed from any feral plants will contribute to new plants only over a very short term, but removing feral alfalfa from ditches and roads is a good idea for organic and export growers to prevent gene flow. If feral alfalfa is deemed a problem in a specific area, then it must be controlled as off types of alfalfa and other problem weeds are currently controlled using cultural and other herbicide methods.

Concern 6. Won't hard seed be a source of contamination?

Hard seed of alfalfa generally does not persist for more than one year in moist soils (Albrecht et al. 2008 *Forage and Grazinglands*), much less after years of hay production. To guard against hard seed carryover, seed growers take steps to eliminate residual alfalfa volunteers prior to planting. State Seed Certification Standards already require that the alfalfa seed field's history include a 2-year exclusion period before planting alfalfa for seed.

(continued)



Roundup Ready® Alfalfa continued

Concern 7. Much of hay in my area is cut late with mature seed – we have good farmers but weather, equipment problems force late cuttings.

Although late cuttings occasionally happen viable seed development is unlikely. Plants must remain in field for 4 to 6 weeks after pollination of flowers for viable seed to form and longer for seed to shatter. Delaying harvest 1 to 2 weeks due to weather, equipment problems and other issues will cause little to no seed production in hay fields (see item #3). Furthermore, hay harvest should remove this small amount of seed so that it doesn't become a problem.

Concern 8. Organic producers may have difficulty growing organic hay.

No – there is no reason that organic growers can't continue to successfully grow organic hay. In fact, the presence of Roundup Ready alfalfa hay in the marketplace may increase the value of organic hay, for buyers who are sensitive to biotech traits. There are a number of growers who currently grow both Roundup Ready alfalfa and organic hay on the same farm without difficulty. Organic growers should 1) select conventional seed that is tested for the trait if their customers have set a standard of adventitious presence, 2) take simple steps to protect their crop from gene flow and 3) identify hay lots after harvest. Feedstuffs can be tested to ensure low biotech levels desired for these markets. Organic growers currently are certified to show that their crops are not grown with pesticides or non-organic fertilizers, and similar steps can be taken to show that they do not use genetically engineered crops.

Concern 9. Couldn't we lose our entire hay export market?

No. While export growers and buyers are sensitive to the presence of biotech traits in crops, they have developed market-assurance methods to demonstrate that they are marketing non-biotech alfalfa hay, including testing to assure buyers of the non-biotech status of hay. Japan, Taiwan, and Korea (main U.S. hay market) already use biotech corn and soybeans and have accepted some RR alfalfa hay. The European Union has approved use of certain biotech varieties of corn and soybeans in food and feedstuffs. While significant in some growing regions in the U.S., exported hay represents less than 1% of total alfalfa hay production.

Concern 10. Isn't the research biased by the seed companies that stand to gain most?

RR technology has been evaluated at many universities. This research is independent of the concerned commercial parties. The goal is to independently test a technology for its viability and environmental safety for farmers and for the general public. These studies must be well-designed, accurate and can only be published after review by anonymous individuals from other institutions selected for impartiality.

Concern 11. Won't the Roundup Ready gene in alfalfa have a negative effect on insects, diseases, other biota, or the environment?

There is currently no evidence that this gene would have a negative effect on insects or animals, or the environment. The Roundup Ready gene has been thoroughly tested as other crops were released (corn, soybeans, cotton) and no impact on any other biota has been found. No toxicology issues have been identified with roundup ready alfalfa fed to animals. In the past ten years, billions of tons of corn, soybeans, cotton and alfalfa have been produced with this gene, and there has been no documented harm to animals, humans or wildlife. In fact the use of Roundup would replace some more toxic pesticides that have been used and found in ground water (e.g. Velpar).

Concern 12. Farmers can't/won't follow stewardship protocols.

All technology requires stewardship by farmers (e.g. fertilizer use, manure management, pesticide use, irrigation). Farmers must be educated about stewardship needed and required to use appropriate stewardship for any technology. The possibility of gene flow is no different in scope than controlling pesticide drift, fertilizer contamination from conventional farms, or for that matter, the influence of weeds from organic fields that may contaminate neighbor's fields. Good farmers know how to do this.

Concern 13. Won't there be weed resistance to Roundup from use of RR alfalfa?

Weed resistance and weed shifts are issues with all herbicides. New management programs have always resulted in shifts in weed pressure. For example, no-till crop production has resulted in different weed problems than when crops were grown with conventional tillage. Resistance to glyphosate has occurred in row crop situations. Inclusion of alfalfa might actually slow increase of resistant populations of weeds because an additional mechanical control (frequent hay harvest) is being added to the weed management program. Techniques are readily available to avoid weed shifts or weed resistance using the Roundup Ready system as detailed in a recent article (Orloff et al., 2008).

Concern 14. Risk far outweighs reward/Do we really need this? Are we willing to take this kind of gamble?

There is also a risk with NOT moving ahead with a technology that has clear potential benefits to farmers and the environment.

Currently, many animals are killed or hurt each year by weedy alfalfa fields – something that Roundup Ready technology could help address. Also, some of the conventional herbicides have been found in well water – something not true with glyphosate. Additionally, Roundup Ready alfalfa would allow farmers to control tough weeds for which no other good method of control exists (e.g. winter annuals such as chickweed, wild garlic, wild onion, perennials such as dandelion, difficult weeds such as nutsedge and dodder, and poisonous weeds such as groundsel).

Further, if this breeding methodology is permanently banned, it would mean fewer genetic advancements for alfalfa in the future. Some traits currently under development, such as a low lignin gene that could mean higher forage yield and fewer cuttings for farmers, a leaf retention gene to retain leaves through harvesting process, genes which confer pest resistance, or genes to increase bypass protein, would never be available to farmers. It is not reasonable or fair to farmers to restrict a technology from use in alfalfa that is available in other crops.

A series of articles on biotech alfalfa and coexistence of GE and conventional alfalfa seed and hay production is available at <http://www.alfalfa.org/CSCoexistenceDocs.html> and <http://alfalfa.ucdavis.edu/+producing/biotech.aspx>.

In summary, it is essential that alfalfa growers and the industry understand how to use this important new genetic tool, while at the same time, protecting those farmers who don't wish to adapt it. Research has proceeded with great deliberation in the development of Roundup Ready alfalfa and shown it to be a good tool that will benefit many farmers. Like every other tool, it must be used with care and appropriate stewardship. It is important for the industry to manage for coexistence of biotech-adapting and non biotech-adapting farmers, since other important biotech traits are being developed which might be much greater benefit to farmers and society.

A response to Drs. Undersander & Putnam's Paper

MFC contacted Dr. Doug Cattani, Business Development Specialist - Forage Seeds with MAFRI to obtain his comments on the Q & A's presented by Drs. Undersander & Putnam.

Concern 1. The answer is not a resounding yes, but that the levels are low enough at this point to escape detection at the level of the testing (the only true yes answer is if all seeds are tested but this is a destructive test therefore impossible to carry out).

Concern 2. Contamination from neighbouring fields. As mentioned seed fields are the most vulnerable and it is stated that the distances for certified production will result in low levels of contamination.

Concern 3. Hay fields can pass along genes to feral populations, and we have number of these in Manitoba (Bagavathiannan & Van Acker, Dec. 2008 MFC Newsletter).

Concern 4. Yes companies will attempt to keep the fields separate, however, the current production isolation guidelines are not effective in reducing the risk to zero.

Concern 5. See above and it would be impossible to control all alfalfa outside of fields. Unless the companies are providing the resources to eradicate the feral alfalfa, then it will not be done as there are too many other problems that the current resources are required for.

Concern 6. Hard seed. Tests have indicated a short life in the soil, however, where and how the test was conducted needs to be examined in order to ascertain the reliability of the estimates (seed buried together in permeable sacks has been shown to underestimate the longevity of seed in the soil (Van Mourik et al. 2005). Also, one of the authors of the study is the head of FGI, the marketers of RR alf. (continued)

Concern 7. The authors state that this is generally not a problem but can happen. (continued)



RR Alfalfa Response Continued

Concern 8. Organic growers and conventional seed. Testing seed does not totally eliminate the potential, however it does reduce the potential. If organic protocols allow for a low level of adventitious presence then this may not be a problem.

Concern 9. Probably not.

Concern 10. Yes.

Concern 11. Correct.

Concern 12. Stewardship guidelines. Many producers attempt to follow the guidelines however small errors do occur and therefore there is potential for escape. Acts of nature do not follow signage and keep out if instructed to.

Concern 13. Weed resistance. Correct, as we increase the use of any herbicide resistance becomes an issue.

Concern 14. Depends upon your definition of progress?



**The National Centre for
Livestock and the Environment**
<http://umanitoba.ca/afs/nclc>

NCLE Research:

Looking at the big picture.....

- the whole is more than the sum of its parts

The National Centre for Livestock and the Environment (NCLE) is a multi-disciplinary research team dedicated to integrating livestock and cropping systems to improve the sustainability of both. With the focus on capturing synergies within the whole system, each researcher on the team brings specialized knowledge and experience - important pieces of the whole picture. To read more about NCLE, check out our website and sign up to receive our newsletters. <http://umanitoba.ca/afs/nclc/>



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Ongoing Research Projects at Brandon Research Centre

By: Hushton Block, Research Scientist – Beef Production Systems

These are a few of the many projects underway at the station as of March 5, 2009.

1. ***Evaluation of rumen degradation of waxy barley versus AC Metcalfe:*** Nylon bags are filled with small amounts of AC Metcalfe or waxy barley leaves and stems, sealed and inserted into steers with a cannula for varying lengths of time. The animal trial is complete and laboratory analyses of degradation characteristics are continuing.
2. ***Swath-grazing preference trial for waxy barley:*** This trial compares the voluntary intake of AC Ranger and Desperado (forage barleys), AC Ultima triticale, and waxy barley (all as swath-grazed material). The animal trials were completed in October 2008, laboratory analyses and data evaluation are ongoing.
3. ***Evaluation of dry distillers grains with solubles (DDGS),*** a bio fuel ethanol by-product produced by the Husky Energy Plant in Minnedosa, as a supplement for wintering cows (January-March). The DDGS supplemented groups are compared with barley supplemented groups and control groups for weight gain, back fat gain, feed intake, diet digestibility, and methane production. The first year of the animal feedlot trial has been completed and the first year evaluation of the animal metabolism trial will be complete next week. Data and sample analyses will occur through the summer.
4. ***Evaluation of long-term supplementation with flax to alter the fatty acid profile of beef:*** Existing research has shown that flax can change the fatty acid profile in the cattle, but the level of change is not consistently high enough to achieve the health claim 'a source of omega 3 fatty acids'. This project will examine the levels required to alter the fatty acid profile. The project will commence in March.

Affiliated Members

US Auction Mart Prices
March 5, 2009

Prices are US dollars/ton except squares \$/cwt	Rock Valley, South Dakota	Iowa South Central/West Central	Minnesota	Pipersburg, Minnesota
Some prices not available				
ALFALFA				
Small Squares				
Supreme				
Premium		200.00	180.00-200.00	140.00
Good				100.00-107.50
Fair				
Large Squares				
Supreme				
Premium			140.00	110.00
Good	85.00-100.00	110.00	75.00-85.00	82.50-97.50
Fair	72.50-75.00			
Utility				
Large Rounds				
Premium	112.50			
Good	95.00-100.00			80.00-97.50
Fair	70.00-77.50			62.50-77.50
Utility				
ALFALFA MIX				
Large Rounds (Good)	77.50-80.00			82.50-95.00
GRASS HAY				
Small Squares				
Premium			115.00-120.00	
Good	90.00-102.50			82.50-95.00
Fair	67.50			75.00-77.50
Utility				42.50-57.50
Large Squares				
Premium				
Good				
Fair				
Utility				
Large Rounds				
Premium			85.00	
Good	80.00			
Fair	65.00-72.50			
BEDDING				
Small Squares	3.30			2.00
Large Squares	16.00/42.50/ton			
Large Rounds	50.00-52.00/ton			21.00-28.00/cwt
PELLETS				
Dehydrated Alfalfa 17 pct.			210.00-215.00	

Attend the Forage & Grassland Planning Session & our AGM

APRIL 8, 2009 Portage la Prairie



2009 MANITOBA FORAGE SEED SCHOLARSHIP

Application Deadline: October 30, 2009

The Manitoba Forage Seed Association (MFSA) has implemented a scholarship program for students entering or currently enrolled in the degree or diploma program in the Faculty of Agricultural and Food Sciences at the University of Manitoba.

This scholarship award is to be offered to a qualified High School or University Student who:

1. is a resident of Manitoba; and
2. is a member of, or has a parent who is a member of the Manitoba Forage Seed Association (MFSA), or who has a special interest in forage seed production school study related to forage seeds); and
3. is enrolled, or is applying to enroll in a degree or diploma program in the Faculty of Agricultural and Food Sciences at the University of Manitoba; and
4. has achieved a cumulative grade point average of at least 2.5 or 65%.

For further information and an application please contact Heather McBey at (204) 376- 3309.



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