Fall 2008

# THINK GREEN! Newsletter

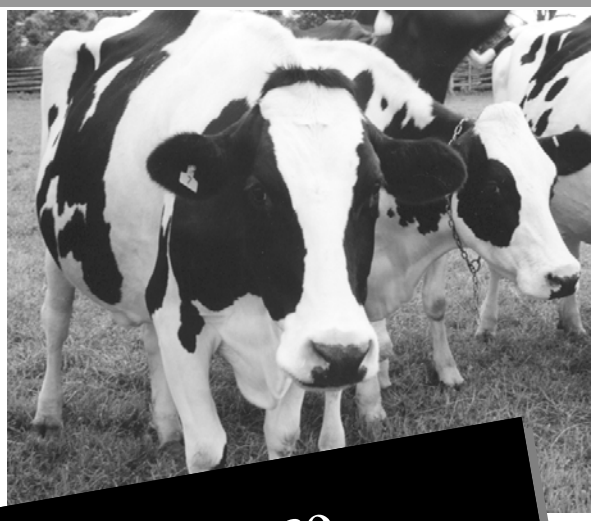
Ontario Forage Council

## Forage Focus Conference

The Ontario Forage Council will host the seventh annual Forage Focus Conference on

Tuesday, December 2nd
in Winchester
Wednesday, December 3rd
in Shakespeare

Dr. Limin Kung Jr. PhD, A professor at the University of Delaware will be the feature speaker at the Forage Focus conferences this December 2 in Winchester and December 3 at Shakespeare. He has received numerous awards for his research and work in forage production and is recognized world wide for his expertise. We are indeed privileged to be able to have him speak to us about the art and science of making good silage and his discussion of forage production. Visit our updated web site for further details as they develop. Fritz Trauttsmandorff will share some of his secrets of making good dry hay. This will also be an excellent presentation with many practical "take-home" messages. Mark your calendar and pre-register early so that you won't miss this. www.ontarioforagecouncil.com



Forage Focus Conference
"Making Forages The Foundation Of Your Future"
hosted by the Ontario Forage Council
December 2nd in Winchester and December 3rd in Shakespeare
Keynote Speaker: Limin Kung, Professor & Research Scientist,
Dept of Animal Food & Sciences, University of Delaware

**To Register: Call 1-877-892-8663**
**Deadline to Register: Nov 28th**
**Conference Cost: $35 ( includes hot beef dinner and conference proceedings)**

He who knows best, knows how little he knows.
**Thomas Jefferson**

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## Update from the Ontario Forage Council

*By John Adema*

The summer, with its few short durations of good sunny drying weather, has proved to be very challenging in making quality hay. What a difference one year can make with respect to weather patterns. Last year there was a very limited amount of rain. This year we wondered when the rain would stop. One may develop good skills in selecting appropriate forage varieties for certain soil conditions, yet all this expertise comes to naught when faced with an excess, or lack, of sunshine or rain.

During the month of July, the Forage Expo held at the farm of Don Rowntree, provided those in attendance with a good opportunity to witness the demonstration of the latest in hay making equipment. Comments from the presenters about making specific adjustments for different hay conditions were beneficial for improving operational skills. The field demonstrations gave us sunshine while the afternoon gave us rain with the

## Appendix 1. Best Management for Fertilizers on Northeastern Dairy Farms.

| Practice | Best | Making Progress | Improvements Needed |
|---|---|---|---|
| **RIGHT SOURCE** | | | |
| 1. Credit nutrients from manure and composts | Analyze for total and available nutrients | Occasional or partial analysis | No nutrient credits considered |
| 2. Credit N from previous crops | Adjust N rates based on research data for credits from previous crops, particularly legume hay or sod | Reduce corn N rates when following alfalfa | No consideration of N credits from previous crops |
| 3. Choose a fertilizer nutrient source to suit the crop, soil, and placement | Source chosen to suit application method , blend compatibility, crop needs and sensitivities, and price | Compare anhydrous ammonia, urea, urea-ammonium nitrate, ammonium sulfate, and ammonium nitrate for price | No consideration of sources |
| 4. Assess use of enhanced-efficiency N sources | Use controlled-release N or inhibitors to match N release to crop N needs where split application is impractical | Partial use of controlled-release sources or inhibitors | Not considered |
| **RIGHT RATE** | | | |
| 5. Measure soil nutrient supply | Soil analysis for pH, P, K, and other nutrients every 2 to 3 years | Most soils analyzed within past 5 years | Soils not sampled in last 10 years |
| 6. Maintain soil pH | Lime applied in fall whenever required | Lime applied occasionally | No testing for soil pH |
| 7. Calculate nutrient removal and balance | Calculated from measured yield and nutrient content | Based on estimated yields and nutrient content | Not considered |
| 8. Determine crop yield potential and nutrient demand | Measured yields from at least 5 past years | Measured yields from at least 3 past years | Desired yield level, or not considered |
| 9. Estimate most economic rates at current prices | Use a calculator based on regional crop response data | Use a generalized calculator based on price ratios | No consideration of relative prices of crop and fertilizer |
| 10. End-of-season evaluation for appropriate N rates | Use late season cornstalk nitrate test or soil nitrate test | Monitored occasionally | Not monitored |
| **RIGHT TIME** | | | |
| 11. Assess split application to match crop nutrient uptake | Split applications used wherever practical | Partial use of split applications | Not considered |
| 12. Crop scouting and plant analysis | Done regularly and systematically for each field | Occasionally done to diagnose problem areas | Rarely or never |
| 13. Manage cover crop for optimum nutrient-release timing | Cover crop killed at optimum time for yield of following crop | Cover crop killed in fall | No cover crop |
| 14. Assess optimum timing to suit tillage system | Fertilizer applications with conservation tillage or planting | Fertilizers applied before conservation tillage or planting | Not considered |
| **RIGHT PLACE** | | | |
| 15. Calibrate equipment for accurate metering and placement | Maintain and test application equipment annually | Equipment well maintained | Equipment functioning poorly; rate adjustment "seized" |
| 16. Assess possibilities for with-seed and band placement | Banded or with-seed starter use based on soil test | Banding or with-seed starter for some crops | No equipment for directed placement |
| 17. Management zones for variable rate application | Management zones based on multiple-year yield data | Zones delineated by expected productivity | Not considered |
| 18. Apply soil survey information | Detailed soil survey maps available and in use for each field | Soil survey maps used for some fields | Soil survey information not used for any fields |
| 19. Use risk indices to protect water quality | Use Nitrate Leaching Index and Phosphorus Index | Maintain unfertilized buffer of set width from watercourses | Full field practice to stream bank |
| 20. Incorporate or inject volatile sources | Manure injected; urea banded or soil-incorporated | Manure incorporated within one day after application | Manure or urea surface-applied |

*Above excerpt taken from Fertilizer BMPs—Best Management for Fertilizers on Northeastern Dairy Farms by Tom W. Bruulsema & Quirine Ketterings*

# Buying or Selling Hay?????????

Have you checked out our New Hay Listings Service at **www.ontariohaylistings.ca**? As of this morning, 28,500 people have! It's a new, free, efficient, easy, and effective method of selling or finding hay or straw. It is surprisingly quick to upload using dial-up Internet connections. The site was officially launched at the Forage Expo on July 22nd. To date, we have 231 registered members and 100 ads posted (for sale and wanted). We couldn't be happier with the response!

We would like to thank our Hay Listings Sponsors, Quality Seeds and Elmira Farm Services. Their generous support will ensure the long-term sustainability of this site. Sponsorship opportunities will become available again in January 2010. A special thank you to James Wright, of Wright Net Designs who developed this amazing new site.

We would encourage you to go to the site. If you want to post ads or obtain contact information, you are required to register (right side of screen), with a user name and password. After receiving a confirmatory email, and clicking on the blue link, you will be able to browse the ads at your leisure! We have created an extensive Help section if you have any questions while manoeuvring on the site, or just give us a call, and we will be happy to help you! Please let us know what you think of this site.

## Grey County Manager Recognized for Outstanding Efforts in Agricultural Extension

### Press Release from OAC — June 11, 2008

Ray Robertson, manager of Grey County Agricultural Services in Markdale, has been chosen as the recipient of the 2008 T.R. Hilliard Distinguished Agricultural Extension Award. Robertson is well known for his leadership in the agricultural community, especially in Grey and Bruce counties. His efforts were instrumental in the establishment of the Grey County Agricultural Services office and the Bighead and Beaver River projects, and he played a leadership role in rejuvenating the Grey Bruce Farmers' Week, an important educational venue for many producers in the Grey-Bruce area.

Robertson has also been an effective advocate for the adoption of environmental stewardship practices in farming communities, serving as Coordinator and Leader of the Environmental Farm Plan for Grey County. This year's recipient was nominated by the Ontario Forage Council, the Grey County Soil & Crop Improvement Association, and the Ontario Canola Growers. The award presentation will take place during Grey Bruce Farmers' Week in January 2009.

The T.R. Hilliard Distinguished Agricultural Extension Award was established by the OAC Alumni Foundation to recognize individuals who are making significant contributions in agricultural extension in the province of Ontario.

**The Ontario Forage Council thanks the Ontario Ministry of Agriculture, Food & Rural Affairs for its support**

Ontario



## Planting Cover Crops Part of the System to Build Soil and Scavenge Nitrogen!

Cover crops are just like investing – plant early and often to take advantage of any soil moisture left after harvest and to get the most growth. The last few years of doing a cover crop survey has shown that a cover crop like oats if planted early can accumulate top growth dry matter as much as 7 tonnes. Some of the later planted cover crop oats only made 1.5 tonnes. This has been the year to be ready to go when you get the chance between showers in many areas. Also if you are short of feed, fall oats may help fill the bill. The nitrogen taken up in the above ground tissues reflected the biomass accumulation and varied from 20 to more than 100 kg of nitrogen per hectare. Admittedly we do not see an economic return of nitrogen in the immediate following year – however cover crops are part of a system and do feed into soil organic matter building. Cover crop benefits accrue over time much like the interest rate on a savings account.

More information on cover crops can be found at http://www.omafra.gov.on.ca/english/crops/facts/cover_crops01/covercrops.htm &

Midwest Cover Crop http://www.mccc.msu.edu/

*Editorial Note: If you bale your straw off a cereal field four times in your rotation you lose 0.10 or 1/10 % of organic matter but if you plant cover crops 3 times you will replace it. What's 1/10% of organic matter? It releases an equivalent to a 1 ¼ inch rain during a drought year right when you need it! Quote from Peter Johnson at the Georgian Central Soil and Crop Improvement Association Twilight Meeting 2008.*

# Understanding Pasture Gains In A Wet Year

In a year with plentiful rainfall, pastures remain lush and continue to grow through out the summer. It is always encouraging to see green grass in August rather than having all fields brown and needing to feed hay.

Pasture gains in these wet years are often a little disappointing. One would think that with all the lush grass, and high quality feed available all season, gains should be excellent, but this is not necessarily the case.

To understand why this happens we need to look at or understand how an animal eats on pasture. Cattle bite at about 15 bites per minute for 6-10 hours per day. Body fill is the main factor determining when they quit eating, In a year with adequate rainfall, the dry matter content of the grass is lower - likely in the 15-20% range, in a drier year the grass may have a dry matter content of 20-25%. If an animal grazed for 8 hours per day at 15 bites per minute this represents (15 X 60 X 8) 7200 bites each day.

As an example a 400 kg animal on pasture requiring 2.5% of body weight in dry matter intake for maximum growth, this animal would need to consume 10 kg of dry matter.

If each bite is 7 gms - a typical bite size for this animal - and this animal is going to eat 7200 bites then it will consume (7200 bites X 7 gms) 50.4 kg of pasture.

If the pasture is 20 % dry matter this 50.4 kgs represents 10.8 kg of dry matter and the animal has met their needs.

If this pasture was lush and had 15% dry matter (typical of a wet year), then our beast would consume 7.5 kg of dry matter (50.4 kg X 15%) which falls short of its dietary needs. Under this scenario the animal needs to consume 66.6 kg of pasture to meet their optimum needs. This means eating for longer (more bites), or not meeting its energy needs and having less than optimum growth.

In a dry year when the pasture would have 25% dry matter, then this same animal would consume 50.4 kg X 25% which equates to 12.6 kg of dry matter, well above the requirement of 10 kgs. This animal would have the option of grazing for fewer hours and still meet its requirements, or graze for the same time and have exceptional gains

We can look at this another way – from the perspective of hours grazing. Let's assume that the average bite is 7gms of pasture and that the animal eats at 900 bites per hour or 6. kgs of pasture per hour of grazing.. With pasture at 15% dry matter our animal needs to eat 66.6 kgs of pasture which would require 10.6 hours of grazing. This same animal eating 20% dry matter pasture would need to eat 50.4 kgs of pasture which would take 8 hours.

If in a dry year the pasture was 25% dry matter then 40 kgs would meet their needs and this would take 6.3 hours to consume.

In a wet year it takes more hours of grazing to meet the dietary needs than it does in a dry year assuming adequate forage is available.

To see this in another way it is like sitting down to a meal that is a big bowl of soup. Across the table from you is a person with a bowl of stew. You both have the same sized spoon. Who is going to feel full or satisfied first? The person eating stew. Can you get enough nutrition from the soup? Yes, but only if there is a second or third bowl offered and you have longer to eat your meal.

**by Jack Kyle**,
*Grazier Specialist, OMAFRA*

# What factors affect the nitrate content of forages!

**By Gilles Bélanger and Gaëtan Tremblay, Agriculture and Agri-Food Canada**
**Soils and Crops Research and Development Centre, Québec**

Forage containing more than 0.17% of N-$NO_3$ (dry matter basis) is considered potentially harmful for ruminants. The nitrate content is influenced by the following:

**Nitrogen fertilization** – Excessive nitrogen (organic or inorganic) fertilization or late-season application of nitrogen can cause an increase in nitrates. The magnitude of the increase will depend on soil type and weather conditions. Nitrate levels are higher at the start of regrowth and two weeks after nitrogen fertilizer is applied.

**Plant species, stage of development, and part of the plant** – Nitrate accumulation can be more pronounced in sorghum, millet, oats, ryegrass, and orchard grass than in timothy and bromegrass. Legumes tend to accumulate low levels. Some weeds, such as lamb's-quarters, are nitrate accumulators. The nitrate concentration tends to decline with maturity, except in sorghum. The lower part of the stem contains the highest nitrate levels.

**Growing conditions** – Under adverse growing conditions, the nitrate conversion rate declines but the roots continue to absorb nitrates; this leads to nitrate accumulation. Cereals and permanent pasture grasses can accumulate nitrates during hot, dry weather, whereas corn and sorghum may do so when the weather is cool or when growth is disrupted by frost.

**Conservation method** – Although drying has no effect on the nitrate content of hay, fermentation of silage can reduce nitrate levels by more than 50%.

To minimize nitrate-associated problems, it is necessary to consider the amount of nitrate ingested daily, the animal's adaptation, feeding practices, the nutritional quality of the ration and the animal's general health.

# Saving Hay

## New preservatives can help reduce hay spoilage

In today's competitive age of farming even the slightest variation in crop quality can affect one's end gain. Enter preservatives research.

The development of innovative ways of treating forage has huge potential for farmers coping with crop losses. Buffered propionic and aceticorganic acids have emerged as proven means of minimizing harvest and storage losses; and also minimizing profitability. Yet this topic continues to remain on the debating table among forage growers and end users.

OMAFRA says that there are a number of losses associated with the production of dry hay. Because the leaves contain about half of the dry matter and tow-thirds of the protein, leaf loss has significant impacts on yield and quality."

OMAFRA also reports dramatic loss in protein per acre and digestibility in hay when experiencing heavy rainfall.

Typically, Ontario's climate and weather are quite unpredictable. For hay growers it can be very difficult to harvest and store top quality dry bale forage under less than ideal weather conditions. This is where preservatives become a vital tool for local farmers.

Joel Bagg, forage specialist in field crops at OMAFRA, explains some of Ontario's forage problems.

"We live in a high humidity climate with frequent rain, so sometimes the window for dry time isn't the best."

As Bagg explains, ideally farmers want the drying process to work as quickly and as thoroughly as possible.

Unfortunately, with weather and other variables, this is rarely possible. The process has also been affected by the use of big balers. It's harder to get big square bales to moisture levels that keep the hay safe from moulds and bacteria.

"Moulds greatly reduce the value of dry hay, particularly when targeting the quality horse hay or dairy hay markets," said Bagg. "Moulds consume hay nutrients and cause dry matter losses, as well as produce toxins that are detrimental to animal health.

For example, hay dusts have been found to have respiratory effects on horses. Symptoms such as "the heaves" can occur.

Preservative products help stop moulds and bacteria that are caused by poor weather conditions and other factors.

By reducing Ph levels within forage these preservatives can allow for hay to be baled a moisture levels of up to 30% above normal. In turn, this gives farmers a much larger window of opportunity to bale quality hay Dry time id reduced, while are the same time, there is an increase in feed value. Also, through control-improved fermentation, the forage often shows increased digestibly and palatability of the hay remains high.

One of the most popular and successful forms of dry forage treatment is a buffered propionic acid. Typically most propionic formulas are used as a fungicide. It actively works after baling, while the hay bales are curing down to secure moisture levels during evaporation.

A majority of spoilage is caused by organisms that depend on neutral to high pH levels to survive. Propionic acid deters this by lowering pH to state that inhibits mould growth so these organisms can no longer thrive, thus preventing spoilage.

For all the potential good propionic acid can do, there are still skeptics. In the past, corrosion has been something producers may relate to in acidic product discussion. The corrosiveness of organic acids had been a drawback. But the concept of buffering acids is changing minds.

The new generation of products such as a "The Juice" from Nuhn Bio-Tech near Sebringville, are buffered. This can make them almost as mild as tap water.

"These acids are totally safe to use," said Nuhn Bio-Tech operations manager Terry Nuhn. "In working with our dispersing agent, propionic acid is more efficient and consistent. Citric acids work well in preserving natural green colour and freshness."

The fact is, these buffered acids are harmless. As OMAFRA explains, propionic acids are actually organic acids that are commonly produced in the rumen of cows and also the cecum and colon of horses. The acid is produced as part of the animal's digestion and is always present in the animal's digestive system. Thus, it's something livestock are already producing.

Before a hay preservative can b sold, it must be registered and certified through the Canadian Food Inspection Agency before sales and distribution. This ensures the accuracy of their product claims and effectiveness for customers.

"Although many of there preservatives work quite effectively under certain conditions, they are not to be seen as a farmer's magic cure all. They are meant to work along with proper forages harvest and storage maintenance.

As Bagg concludes, "They're a good tool for farmers to use to tweak the crop preservation fermentation process in their favour."

Research into bio-technology will continue to grow. Staying educated in these discoveries can go a long way.

"With the cost of land, equipment, and especially fuel today, you can't afford to make a bad bale."

**By Aaron Watson,**

*This article was previously published in the Regional News*

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The Ontario Forage Expo hosted by Halton County Soil and Crop Improvement Association and the Ontario Forage Council was well attended.

The weather allowed us to have excellent hay equipment demonstrations in the fields of Don Rowntree near Georgetown. Rain followed as the speaking program moved in doors. Don shared his experience of marketing hay. The new Hay listing web site was launched and further presentations addressed hay preservatives. A memorable quote of the day was "*It is the person sitting on the tractor seat that makes good hay but it is nice to have good equipment*".

# Making the Most of Rain Affected Forages*

The years 2007 and 2008 will undoubtedly be remembered as two of the most extreme years most of us will ever experience in terms of producing good quality hay crop forages. 2007 was dry and sunny across most of Canada, so forage quantities were often limited by less than normal precipitation. It was however, very easy to produce good quality forages since they dried very quickly once cut. Through most of the 2008 season it seemed almost impossible to get 2 or more days of sunshine together in order to harvest quality forages. While there is a lot of forage available this year the quantity is often mediocre to poor.

There are 4 main factors which reduce the quality of forages in a year like we have just had. The first is the stage of maturity, which is more advanced than ideal in many cases just because cutting was delayed. The second is chemical losses which occurred as cut forage was exposed to soaking rains after cutting. These losses are of the most soluble nutrients, such as sugars and perhaps even some soluble minerals. The third is mechanical loss of leaves as the forage was subjected to various mechanical operations in an attempt to get it dry enough to bale. The final factor is the growth of yeasts and moulds in forages after baling, especially if no preserving agent was used on forages which were not adequately dried. These organisms consume valuable sugars while growing, as well as reducing the palatability of the feeds. The data from Wisconsin shown in Table 1 documents the extent of dry matter losses caused by different weather conditions. Keep in mind that these dry matter losses are of the most soluble nutrients.

| Weather condition | Dry matter loss(%) |
|---|---|
| No rain | 6.3 |
| 1inch after 1day rain | 22 |
| 1.6 inches over several days | 44 |

Table 1: Effect on dry matter loss of hay

**What can you do?**

**Step one – Determine what you have in terms of quality**

Feed sampling is always an essential part of ration balancing, but it will be more vital than ever this year. Ideally hay will have been inventoried by type, harvest date, field or some other system which will allow sampling of like types. Core samples should be taken from the end of big and small square bales and the round side of round bales. This will ensure that the sample is across layers and represents the whole bale.

Take and submit samples of like types of forage separately, rather than combining them to get an overall average. This will allow for the various forage types to be fed to the type of animal that will best be able to utilize them. It will also allow for ration balancing to account for the differences in the various lots of forage. In addition to the regular components like protein and minerals, it is important to analyze for the NDF (Neutral Detergent Fiber) content of the forages. This is the component of feed analysis that will be most affected by the conditions listed previously. It is also the first limiting factor in determining how much forage a ruminant can consume. As shown in Table 2, the NDF content will have a major impact on the amount of forage cows at different production levels can eat.

| 4% milk per day (1) | 40% NDF forage | | 50% NDF forage | | 60% NDF forage | |
|---|---|---|---|---|---|---|
| | Min | Max | Min | Max | Min | Max |
| 23 | 53 | 84 | 42 | 67 | 35 | 56 |
| 45 | 53 | 57 | 42 | 46 | 35 | 38 |

Table 2: Effect of NDF content on possible forage level in ration

The second limiting factor in forage utilization is the digestibility of the NDF (NDFD). In other words, once the cow has consumed the forage how much energy can it get out of the forage and how long will it stay in the rumen? The data, again from Wisconsin, shown in Table 3 show the impact of NDFD on the potential milk production from forages of different qualities.

Table 3: Impact of Alfalfa quality on potential milk production

| CP%,NDF% | NDFD % of NDF | Milk l/ tonne DM* |
|---|---|---|
| 22,40 | 60 | 1528 |
| 22,40 | 50 | 1377 |
| 22,40 | 40 | 1220 |
| | | |
| 16,50 | 60 | 1348 |
| 16,50 | 50 | 1171 |
| 16,50 | 40 | 986 |

*Calculated using Milk 2000

**Step two - Allocate the different quality forages to those animals that can best utilize them.**

It is obvious from the data in table 2 that lower producing cows will lose less in terms of production if they are fed the lower quality forages. Also, growing animals will suffer less in relative terms from eating lower quality forages than milking cows. It may be a case of minimizing losses rather than maximizing gains to feed the poorest quality forages to those animals that will lose the least.

**Step three - Supplement the forages to replace the nutrients lost due to weather problems**

As stated earlier the main components lost due to rain are the most soluble. Keep in mind that when you are feeding ruminants, you are really feeding the rumen bugs. In order for the cow to do well, the rumen bugs need to be able to grow quickly to digest the fiber portion of the ration. The most economical way to supply some of the soluble nutrients missing in poorer quality forage is to feed some good quality forage along with it. The particle size of the poorer forage may have to be reduced in order to keep cows from sorting it out. If adequate good quality forage is not available, a supplemental source of

# Research Report: Ontario Forage Council

## Project Title: Estimating the Value of Ontario Forage Industry

Forage is a key component of the primary production industry in Canada, and its intrinsic value to farmers is undeniable. Furthermore, the rise of the bio-fuel phenomenon is triggering an increase in the examination of the versatility and usage of forage. Yet, the extrinsic value of forage has proven difficult to define. Quantifying the amount of forage produced and sold is challenging, and pricing also becomes rather complicated, with forage often being undervalued in the market. At the Kemptville Campus of the University of Guelph, researcher Jim Fisher has completed a study to examine these issues.

The objectives of the study were to determine a monetary value for the forage industry and investigate the economic impact of the industry in Ontario. In order to do so, a voluntary online survey was conducted that asked farmers to input their forage production data for 2007. Producers were asked a total of 18 questions related to production of forage, price, storage, and cost. Data was collected pertaining to these varying aspects of forage production and analyzed to determine both quantity and price. The project was sponsored by the Ontario Forage Council and funded by the Canada-Ontario Research Development Program (CORD IV) through the Agricultural Adaptation Council. Support from the Dairy Farmers of Ontario, Ontario Cattlemen's Association, Ontario Sheep Marketing Association, Ontario Soil and Crop Improvement Association, and Ontario Farmer's Association was also greatly appreciated.

The survey produced a final pertinent number of 612 responses, from varying farms and regions all across Ontario. Data was examined using Excel worksheets and Canadian Census data was also used to determine values. Forage values ranged from $104.4M at operating cost to $512M according to Canadian Census figures, to the survey findings of $638.5M. The best estimate of the value of Ontario's forage industry was calculated to be $647.7M, based on imputed prices derived from a nutrient component analysis. The numbers lead to the conclusion that dry forage prices are slightly overstated in the marketplace, and that silage prices are understated by farmers based on nutritional content. The study estimate puts forage as the second largest field crop in Ontario, being about two-thirds the size of the corn industry and approximately 30% larger than the soybean industry in 2007.

## Making the Most of Rain—Affected Forages *

*continued from page 6*

soluble nutrients should be considered. A listing of possible sources of these nutrients, from a recent article by Dr. Mike Hutjens, is shown in Table 4.

| Feed ingredient | Starch | Sugar | Soluble Fiber |
|---|---|---|---|
| Wheat grain | 64 | 2 | 3 |
| Barley grain | 58 | 2 | 3 |
| Bakery waste | 45 | 8 | 2 |
| Corn distillers grains | 3 | 4 | 8 |
| Wheat midds | 22 | 5 | 6 |
| Molasses | 0 | 61 | 0 |
| Whey | 0 | 69 | 0 |
| Beet pulp | 1 | 8—20 | 21 |

Table 4: Soluble nutrient levels of different feedstuffs.

Work with your nutrition advisor to determine which of these supplemental sources of soluble nutrients might work best in your situation. **Step four - Guard your health when working with moldy feeds**. Mould spores are a major causative factor in the respiratory condition commonly known as Farmer's Lung. There are both acute and chronic forms of this potentially debilitating condition. If you or your employees must work in a confined area around moldy forages, consider the use of a good quality dust mask. Consult a health professional to determine the best type for your situation.

Dr. Doug Yungblut, P.Ag. is a consultant to the livestock industry. He can be contacted at (905) 785-7765 or by email at doug.yungblut@sympatico.ca.

* This article was previously published in Country Guide magazine

## Our Website Has A New Look!!!!

**www.ontarioforagecouncil.com**

Ontario Forage Council has a new updated, revamped website, with a brand new look and layout. It uses the latest web technology, which will allow us to use pod casting/video features, and allow the site to adapt easily to Internet advancements. The site now has an internal search engine, which will allow users to search through the extensive list of technical information and articles that have been written for the newsletters. Be sure to check out the Download Section (by hovering over the Home Tab). This Download section contains information resources that will find very useful! This site will grow, and offer more and more, as we fully utilize the full potential of this site. We offer a special thank you to James Wright of Wright Net Designs who developed this site. Ontario Forage Council has endless website possibilities available to us through this new technology, so check out this impressive site often to see what we have to offer.

**The Ontario Forage Council thanks Gencor for the use of the Boardroom, and for their support.**

(continued from Page 1)

added competition of the noise on the metal clad roof, drowning out those making presentations inside the building. Yet the day was great.

Currently your board is considering how best to respond to the Ontario government's Pesticide Banning Act and the efforts by Monsanto to introduce Roundup ready alfalfa in the market place. While the Ontario government has exempted Agriculture from the Pesticide Banning Act, there is concern about potential expansion of regulations in a negative manner. This is all the more reason for those using pesticides or herbicides to be diligent in assuring adherence to product application instructions.

At a recent board meeting, Ian MacDonald, from University of Guelph, gave an impressive overview of the potential for BIO fuel energy in the province of Ontario. This needs to be studied further and could have a major impact on the development of forages in addition to the corn currently being used for ethanol fuel.

Plans have been finalized for the Forage Focus 2008 Conferences to be held later this year in Shakespeare and Winchester. Details of this conference appear elsewhere in this newsletter.

For some time there has been discussion about the Forage Council implementing a hay listing service. This project came to fruition by the diligent efforts of Lori Smith and the OFC Office. Since its formal launch at the Forage Expo, many buyers and sellers of forages have made use of the website. If you are not familiar with this, check it out at www.ontariohaylistings.ca

Currently, there appears to be some discussion claiming that grass fed vs grain fed beef have a lower incidence of E.coli. If proven correct, the implications of feeding cattle could be significant. However, prior to making any changes, the scientific evidence, with extensive research will have to clearly demonstrate that grass feeding does in fact reduce the risk or E.coli pathogens.

While enduring the seasonal weather fluctuations and challenges of harvesting crops, take the showers of electoral promises with a grin.

## Solar Powered Grazing Demonstration at Canada's Outdoor Farm Show

A solar powered grazing demonstration was one of the highlights at the recent Outdoor Farm Show near Woodstock. The demonstration showed the flexibility that solar power can bring to a grazing system.

Solar powered fence energizers from Gallagher and Stafix were used to power the electric fence to give effective control of the livestock. Single wire internal fences and 4 wire perimeter fence gave effective and secure control.

The water source for the pastures was a creek that was approximately 2000 feet from the pasture. A solar powered water system from Kelln Solar was sized for the distance and water volume required to provide water for the two groups of livestock on the pasture.

As an added level of pasture management the Lely Voyageur made its North American debut. The Voyageur is a solar powered fence unit that can be programmed to advance a set distance at predetermined times. An electric fence wire runs between the two units providing a front fence for the grazing system, The Voyageur can be programmed to move as many times as the pasture manager wishes during the day. This system keeps fresh pasture in front of the livestock at all times. Lely research had indicated that there is a 12% improvement in pasture utilization over a regular rotational system.

Solar powered water pumps and fence energizers allow a pasture manager to practice rotational grazing in any location. The benefits of rotational grazing and clean water will increase the pasture productivity significantly –often in the range of 30%-50%

**By Jack Kyle**
Grazier Specialist, OMAFRA

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