Prairie Steward

Farming For Your Future Environment

The Newsletter of the Saskatchewan Soil Conservation Association Inc. Summer Issue No. 45, 2005

Direct Seeding Into Grass Forage Stands

By Garry Mayerle, PAg
Conservation Agrologist

Most producers would be quick to agree that forage crops are good for our soil resource. Forages are also beneficial in that they remove $C0_2$, one of the harmful green house gases from the atmosphere. However, there are 2 big factors that hinder an increase in forage acres. One of these is economic. Is there a market for the forage products and what are the economic margins? The other factor is the management techniques needed for production of forage products. One of these special techniques is getting forages established. Another is terminating them to move back into annual crop production. Traditionally these procedures have involved intensive tillage. As the percentage of direct seeded acres grows, producers growing forage crops look for lower disturbance methods of getting into and out of forage crops in their rotations. This article relates a grower's experience producing forage seed in a direct seeding system.

In This Issue

Absinth: The Plant that Adapted Too Well p. 4

Plan for Pre-harvest p. 5

Managing for Malt Barleyl p. 6

SSCA & Soil Carbon p. 7

2004 Forage Fertility Priject p. 8

Riparian Management Demos p. 9

CLC Showcasing New Varieties & Products p. 14

Celebrating Rural Roots p. 16

Gord Pearse seeding wheat directly into sprayed out green needle grass.

Gord and Cindy Pearse farm 15 miles north of Tisdale in the Silver Stream district on a 4th generation farm. Gord and his dad, Terry, have had more than 20 years of experience growing forage crops for seed production. Gord is pleased with the high potential return of forage seed but recognizes the big production and marketing risks associated with these crops.

The Pearses first tried to make direct seeding work back in the late 80's. Gord now seeds with a Concord and uses a 3 inch spread tip with a seed diverter which spreads the seed about 2.5 inches and gives him 2 rows of seed although they are not too well defined. He places dry fertilizer with the seed and dribbles liquid fertilizer down behind the shank in between these 2 rows of seed.

The photo shows a 45 acre field of wheat in the spring of 2004 seeded directly into the stubble of Green Needle Grass. This field produced 6 crops of grass seed. The last crop was harvested late in July 2003. Gord sprayed 1.0 L / ac of Transorb® on Sept 10th that fall. The fall of '03 was a long, warm fall and by freeze-up, Gord says the grass looked pretty much dead. A few sprayer misses certainly showed up. He seeded this field May 11, 2004. He emphasizes that it was important to keep

CONTINUED PAGE 10

PERRL - Pilot Carbon Trade

By Blair McClinton, PAg
SSCA Executive Manager

Well, it finally happened. After years of discussions with various groups, SSCA signed an agreement to trade agricultural soil carbon. This past April, we learned that our proposal to trade agriculture soil sink emission removals with Environment Canada's Pilot Emission Removals, Reductions and Learnings Initiative (PERRL) was accepted. This historic pilot project is the first agricultural soil carbon trade in Canada. This $1million project will result in over 53,000 tonnes of CO_2e (note: "e" stands for equivalent) stored in the soil as temporary emission removals.

The late approval from PERRL forced us to scramble to sign up farmers this spring. Even though this project was limited to SSCA members and members of sister farm groups in Alberta, BC, Manitoba and Ontario, the project was filled up with 205 farmers. The provincial breakdown is:

BC	2
Alberta	29
Saskatchewan	146
Manitoba	23
Ontario	5

I want to thank everyone who took the time to send in an application. While we were only able to accept 146 of the 185 applications, your interest alone makes an important statement. I also want to thank David Gehl from the Indian Head Research Farm for assisting us with our selection lottery.

Like all offset trades, there will be third party verification as part of this project. The agricultural consulting division of Meyers Norris Penney is contracted to provide this service for the project. Verification involves conducting field inspections of 20% of farms in the project plus a review of SSCA's internal procedures. A few of you have likely met someone from the verification team since field inspections were carried out in the last part of June.

We are currently in the process of signing contracts with all of our cooperators. Later, this fall, we will submit a claim report to PERRL. PERRL has 90 days to review our claim before they pay SSCA. So, if everything proceeds as planned, checks should be in our cooperators hands next February.

In summary, this project is largely an administrative project. The only verification required is to ensure that zero till management was used. No soil samples will be taken, no signs will be erected, no field tours will be held. This pilot project is strictly about issues surrounding carbon trading. Some of the questions we hope to answer are things like:

- Will farmers sell / lease carbon credits?
- How do we develop contractual arrangements between the aggregator (SSCA) and farmers as well as the buyer?
- What type of information do we need to collect?
- What administrative procedures need to be developed?
- How is zero till defined?
- What are the verification and other administrative costs?
- How is zero till management verified?
- How much land will have to be withdrawn from a project in a particular year because a special management problem arose that required tillage or burning?
- Will there be problems with misrepresentation?

As you can see, there is a wide variety of questions to answer. Hopefully, this project will help us answer these.

Have a great summer!

The Prairie Steward is published three times a year by the Saskatchewan Soil Conservation Association with support from:

President's Message

By Darryl Reynolds
SSCA President

Congratulations to the 145 SSCA members that were drawn as participants for the PERRL contract. **This is the first soil carbon trade in Canada** and you are truly pioneers in a new and emerging economy. Although the size and scope of the contract is rather small, it does allow us to try a trade on a limited scale and to learn what may be involved on a larger scale contract.

Our Carbon committee has once again had a busy time since our annual convention. We successfully had a resolution passed at the APAS annual meeting supporting our opposition to the BAU (Business as Usual) component of the federal plan which penalizes Saskatchewan producers with about 75% of an annual 10 million tonne of carbon appropriation for early adoption of conservation tillage. APAS then supported a similar resolution at the annual CFA meeting in Ottawa that was also passed.

We met with federal GOC (Gov't of Canada) bureaucrats to discuss future plans. We were disappointed to learn that BAU was firmly entrenched in their plans. When we challenged them, we were told that Kyoto would fail without BAU. **BAU breaks two key promises made in the GOC climate change plan. The first is that there will be recognition for early adoption and secondly, that no region of Canada will be adversely affected**. We have clearly been out-lobbied by the LFE's (Large Final Emitters) and we were told that there "are winners and losers" in every situation. This isn't something you tell the "winners".

Our Carbon team also met with provincial bureaucrats to update and exchange ideas on how to move forward on the carbon issue.

The day that Kyoto came into effect, the National Post Financial section compared the carbon potential to the oil and gold commodity sectors. We have always talked about 1 TE / acre / year at $10 / acre / year. I thought that if I was the CEO of a gold mining company looking for investors in a new mine, that I would announce the total number of ounces of gold to be mined times the current value for a total value and then announce how many years it would take to extract that gold. This would give us a different view of the soil carbon value in Saskatchewan. Just as a gold mine has a finite number of ounces of gold to extract, we have a finite number of tonnes of carbon we can store or sequester. There is nothing scientific or absolute about these numbers, just trying to put a value on what we know.

"BAU breaks two key promises made in the Government of Canada climate change plan. The first is that there will be recognition for early adoption and secondly, that no region of Canada will be adversely affected."

Saskatchewan has about 48% of the arable land in Canada or 43,000,000 acres of cropland and summerfallow. If we use our rule of thumb of 1 tonne / acre / year (our own "1 tonne challenge" referring it to the Rick Mercer GOC advertising campaign) on 43 Million acres is 43 Million tonnes of carbon stored per year. It is estimated it will take 30 to 50 years to fill the soil sink so 43 times 30 is 1.29 Billion tonnes of carbon and 43 times 50 is 2.15 Billion tonnes of carbon. This would be our gold mine analogy of total carbon we can store.

"The GOC is extracting this value out of your pockets and then sending the Hon. Wayne Easter around to try and find ways to help farmers out of a cash income crisis. How hypocritical can you get!!"

Now to come up with a value. The CCX (Chicago Climate Exchange) is trading at $2 / tonne with no Kyoto commitments. The GOC's own modeling group puts the current value at $10 / tonne increasing to $15 / tonne by the first trading period starting Jan. 1 / 08 and if the Americans sign on to Kyoto in the next round of negotiations, the value increases to $50 / tonne. The EU carbon value is currently trading at about $30 / tonne.

So lets take our total carbon range of 1.29-2.15 billion tonnes of carbon and multiply it to come up with a value to Saskatchewan. So at the $2 / tonne value trading on the CCX, the Soil Sink has a value of $2.58-4.3 Billion. At the current estimated value from the GOC's own modeling group of $10 / tonne, the sink has a value of $12.9-21.5 Billion. At the estimated value for the first trading period starting in 2008 of $15, the sink value is $19.35-32.25 Billion. At the current EU trading value of $30 / tonne, the sink value is $38.7-64.5 Billion and if the Americans sign on (currently under negotiation), the value of $50 / tonne puts the sink value at $64.5-107.5 Billion.

Now let's do the same for BAU. BAU takes 10 million tonnes of carbon per year as penalty for early adoption. About 75% of this will come from Saskatchewan or 7.5 million tonnes / year. So 7.5 million tonnes times 30-50 years is 225-375 million tonnes. At the CCX value of $2 / tonne, this is $450-750 Million. At the current GOC value of $10 / tonne this is $2.25-3.75 Billion. At the $15 / tonne value, it's $3.375-5.625 Billion. At the current EU value of $30 / tonne it's $6.75-11.25 Billion and at GOC's value of $50 / tonne, if the US signs on, the BAU penalty value to Saskatchewan is $11.25-18.75 Billion.

The GOC is extracting this value out of your pockets and then sending the Hon. Wayne Easter around to try and find ways to help farmers out of a cash income crisis. How hypocritical can you get!!

Absinth: The Plant That Adapted Too Well

By Juanita Polegi, PAg
Assistant Manager & SE Conservation Agrologist

It looks like a shrub and smells like sage. Its Latin name is *Artemesia absinthium*. We know it as absinth or wormwood or madderwort or varmit or whatever you want to call it but can't have printed. Absinth likes areas that are either dry or undisturbed. It grows alongside roads, in ditches, in gravel piles and fence lines. And it's fast becoming a weed in direct seeded fields undisturbed by tillage and in overgrazed pastures where there is no competition from grass. Once established, it's difficult to control.

Like so many of the weeds we now have to contend with, absinth was grown in European flower gardens and used for medicinal purposes According to the publication *Problem Weeds: A Cattleman's Guide*, the Europeans still value absinth for its medicinal properties. The flowers are used to prepare vermouth and absinth and the leaves are used as herbs. Absinth came to North America with the settlers. Its appearance was first documented at Fort Garry in 1860 and at Medicine Hat in 1885. By 1943, absinth had been identified in every province although it especially likes the prairie conditions.

Absinth plant. Photo taken June 2, 2005 near Jedburgh.

Absinth is classified as a simple perennial as it lives for 3 or more seasons and spreads by seed. Each spring, the plant regrows from stored root and crown reserves. The plants range in height from 0.7 – 1.2 metres (2 – 4 feet). The leaves are divided many times and are covered by long silky hairs that give them a grayish-green appearance. The plant flowers from July to September. The flowers are small and yellowish, grouped into heads on the upper leaf node with each flower producing one seed. To view photos of absinth, see Page 124 of the book ***Weeds of the Prairies*** or go to www.ext.nodak.edu / extpubs / plantsci / weeds / w1103-01.jpg

Once it's been determined that absinth is present, it's time to look at controlling the plant.

I spoke with Clark Brenzil, SAF Weed Control Specialist about absinth control and he provided me with a great deal of information. Here are his comments:

The sooner absinth is controlled, the better. If the plant has a real foothold in the field or the pasture, eradication could take many seasons. While late fall tillage is effective in controlling absinth, it is not very helpful in a direct seeded or zero tilled field. Hand rouging small patches of young plants is also effective although very labour intensive, but a well established plant with a large crown will be a tough pull. If the plants become too numerous, then chemical control may be required. Glyphosate products are the only herbicides clearly listing absinth as a label weed although selected 2,4-D and MCPA labels list wormwood under top-growth control along with other perennials.

According to research at North Dakota State University (NDSU), applying glyphosate at a rate of 1.0 L to 1.5 L/acre when plants are at least 12 inches (30 cm) tall will control established absinth plants. Leave 3 to 5 days between treatment and any additional disturbance to allow translocation of the glyphosate in the plant. Because of its tendency to germinate in late summer of fall, preharvest application of glyphosate should be expected to provide good results if the majority of leaf tissues on established plants are still a green colour.

Seed production is heavy in absinth and even with effective control with glyphosate, populations can return quickly from seed. Absinth is primarily an edge weed or a weed of pasture or waste areas, but may venture into fields, particularly under low disturbance direct seeding. Because of this, field edge sanitation is important. Products that can be used in pasture areas (below) will also be appropriate for field edge management. Care must be taken when managing field edges to be conscious of movement of persistent herbicides into the drip-lines of trees and drainage systems.

In pastures and rangeland, the most effective way of keeping absinth from invading the grazing area is to avoid overgrazing. Healthy forage stands are more resistant to the invasion of perennials such as absinth than are stands that have been weakened by overgrazing. Mowing prior to seed set will help to control the establishment of new absinth plants until the mature plants send out horizontal stems that will eventually set seed. When the absinth numbers become too great, then applying herbicide may provide some control. NDSU also looked at several in-season treatments for perennial grass stands. In a grass pasture or rangeland situation, dicamba (Banvel or Oracle) applied at a rate of 0.47 L/acre in 20 to 30 gallons/acre (90 to 135 L/acre) of

CONTINUED PAGE 10

Plan for Pre-harvest

By Tim Nerbas, PAg
Conservation Agrologist

Do you have a plan for pre-harvest? We all make plans for seeding, fertilizer rates, crop rotations, and sometimes even holidays. But do you have a plan to keep perennial weeds in check?

Pre-harvest glyphosate continues to be the most consistent and effective treatment for the majority of perennial weed problems. Left uncontrolled, perennial weeds can severely reduce crop yields. Post-harvest perennial weed control can be an effective alternative on many perennial weeds, but the success of post-harvest is often limited by weather conditions, lack of time, and fall frost. Thus pre-harvest provides the best window of opportunity to control weeds such as quack grass, Canada thistle, toadflax, dandelion, or perennial sow thistle.

For many producers, summerfallow has been used to control some of these problem weeds. Pre-harvest can eliminate the need to summerfallow for weed control. The only other reason to summerfallow or chem-fallow is for moisture storage. In the brown soil zone and during prolonged periods of dryness in other regions, chem-fallow does allow the soil profile to recharge with moisture. Otherwise during normal or above average moisture periods, direct seeding and the benefits of standing stubble continue to make summerfallow a fad of the past.

Perennial weeds are well adapted to conditions where there is no tillage. In the same way, annual weeds such as stinkweed and shepherd's purse are well adapted to the system of traditional tillage. In a direct seeding system there are four windows of opportunity to control weeds using herbicides: pre-seeding, in-crop, pre-harvest, and post harvest.

A pre-seed burn-off is an important tool for direct seeders to control the early flush of weeds prior to seeding. It is a less effective tool for controlling many of the perennial weeds. In some instances it means waiting for the perennial weeds to grow to a sufficient size before spraying. The result is a much lower level of perennial weed control compared to a pre-harvest treatment (Tables 1 and 2). As well there can also be a significant loss of moisture from these actively growing plants.

Let's take an example of a plan for a problem perennial. In many areas, one of this year's prime nemeses is dandelions. For dandelion control in the spring, a minimum of 1 litre / acre is required for plants less than six inches in diameter. For plants greater than six inches in diameter, a rate of 1.5 to 2 litres / acre is required to provide adequate control. A pre-harvest treatment of 1 litre / acre still provides the highest level of control. Research at Indian Head in the mid-90's showed that following up the pre-harvest glyphosate treatment with a post-harvest application of 2,4-D improved the overall control of dandelions close to 100% the following spring. The late application of 2,4-D controlled any late germinating seedlings.

Table 1: Roundup® control of Quackgrass (Monsanto and Academic Research 1984-94)

Treatment	% Control	% Consistency
Pre-Seed	86	78
Pre-Harvest	91	93
Post-Harvest	90	82

Table 2: Dandelion control with Roundup® (Monsanto Research) (Spring trials rated 30 -60 day after treatment, pre and post-harvest trials rated 8-12 months after treatment)

Treatment	% Control at 1 litre / ac		% Control at 1.5 litre / ac	
	Dandelion diameter			
	< 15 cm	> 15 cm	< 15 cm	> 15 cm
Pre-Seed	84	78	94	90
Pre-Harvest	87		-	
Post-Harvest	94		95	

Control options for most perennial weeds in-crop are limited. For instance, control of spring established dandelion seedlings is possible, but for well-established plants, only suppression can be attained.

Pre-harvest continues to the most cost effective method to provide long-term control of not only dandelions but also quackgrass, Canada thistle, perennial sow thistle, and other problematic perennial weeds. At this time of year, the plants' root reserves are typically at their lowest. A l litre / acre application of glyphosate translocates to the roots providing an effective control of existing plants.

If you are planning to use a pre-harvest treatment to control Canada thistle or perennial sow thistle, it is important not to use clopyralid (trade name Lontrel) or products that contain clopyralid as an in-crop weed control option. Clopyralid is an excellent product for providing season long control. But the clopyralid does not allow sufficient re-growth for the timing of a pre-harvest treatment. Thus the long-term control from the pre-harvest treatment will be reduced. It is recommended to use in-crop products that only provide suppression.

Post harvest as the name implies occurs after the completion of harvest. However there are a variety of factors that can compromise the success of the operation. Timing is likely the most important factor as harvest operations take center stage. Also the harvest operation tends to cover the plants with straw and dust. Often a light rain shower is important to clean the plants. Finally, consider the environmental conditions: are the plants actively growing or has a killing frost occurred? All these factors impact the success of the post harvest treatment.

Remember the adage: people don't plan to fail, they fail to plan. Do you have your plan in place? ●

Managing for Malt Barley

By Eric Oliver, PAg
Conservation Agrologist

Many producers have expressed an interest in finding the best techniques to manage barley in order to obtain malting grade. SSCA has implemented a study to address this issue. The study is being conducted in each of our five regions with plots located at Swift Current, Biggar, North Battleford, Bredenbury and Tisdale.

Trying to get malt can be a bit tricky and is largely affected by weather, something we unfortunately have no control over. However, this study is looking at the various factors that we can control to improve the odds of obtaining malt, namely fertilizer and seeding rates. Unfortunately, managing for malt is rather complicated to consistently receive that grade. Too much nitrogen and the grain protein content becomes too high for malt. Not enough nitrogen and the yield suffers. Increasing the seeding rate can utilize available nitrogen, thereby keeping the grain protein low, but it often can result in thinner kernels. Obviously, managing for maximum malt barley yields is not all that straight forward.

After consulting other scientists and professionals involved with malt barley or fertility, the protocols were set up by our illustrious staff member from the West Central Region, Rich Szwydky. The treatments in this study involve two main categories, fertility rate and seeding rate. The fertility portion of the study also has two components to it but in both cases, the seeding rate was 84 lbs / ac. The first series of fertility treatments looks at all four macronutrients and the effect if one of them is missing from the fertilizer blend. The primary treatment is a complete blend of 50-20-10-10 of actual nutrients. Then one nutrient is removed in the blend in subsequent treatments to see the effect that nutrient may have on barley making malt. These treatments include:

50-20-10-10
0-20-10-10
50-0-10-10
50-20-0-10
50-20-10-0.

The other aspect to the fertility component is to vary the rate of nitrogen. The nitrogen rates include 30, 50, 70, 90 and 120 lbs / ac of actual N. The varying rate of nitrogen will indicate the level of nitrogen appropriate for malting barley at each location and in relation the level of available nitrogen already in the soil. At all sites, the fertilizer was sidebanded. At Swift Current, Biggar and North Battleford, the row spacing was 9 inches. At Bredenbury and Tisdale, the row spacing was 12 inches. The barley used in the study was AC Metcalfe and the seed was treated with Gemini.

The last component of the study involves seeding rate. Five seeding rates were used in this part of the study; 24, 48, 72, 96 and 120 lbs / ac. For each seeding rate treatment, a complete blend of 50-20-10-10 of actual nutrients was sidebanded. This aspect of the study should help in determining if changing the seeding rate can improve the odds of getting malt.

Yields will be taken for all treatments in the study and malting quality will be analyzed by Prairie Malt at Biggar. Crop establishment counts will also be taken for the seeding rate portion of the study. In addition, at most sites some malt barley varieties will be showcased.

Stay tuned for tour dates of this project for each location this summer. Although the data won't be all available in the summer, producers will be able to have a look at the study and observe any visual differences there may be at the time. Once the data is compiled we will be reporting the results this winter. Tour dates already set are as follows:

July 7 – Biggar & a tour of Prairie Malt.

July 7 – Swift Current – Wheatland Conservation Area Agri ARM Annual Field Day.

July 28 - West of North Battleford, near Highgate.

Tour dates will also be listed on our website; **www.ssca.ca**. There will be other tours of these sites this summer, but the tour dates have not yet been set. If you you are interested in seeing these plots, please contact the staff person in your region. The contact numbers for the staff can be found on page 2 of this newsletter.

We would like to thank and acknowledge the sponsors for this project; Prairie Malt, Canadian Wheat Board and SeCan.

SSCA & Soil Carbon: It's Been a Long Road

By Juanita Polegi, PAg
Assistant Manager & SE Conservation Agrologist

They say that patience is a virtue. In that case, the SSCA has to be one of the most virtuous organizations around. With the implementation of the SSCA-PERRL Carbon Trade this spring, I realized that it has taken a very long time to get to this point. One of the many advantages to being a long-term employee is that I was here when the directors of the SSCA first began talking about the potential of soil carbon sequestration. It's been a long road. The Board of the SSCA, directors both present and past, must be commended for their determination to see this one through. As a member of the staff, I knew only a little about the obstacles and frustrations put in front of the Board as they pursued the "carbon cause". But the Board persevered and we now have a pilot trade in carbon occurring in several provinces.

The first reference I can find in the *Prairie Steward* to soil carbon sequestration and its potential is in Issue #19 (Winter 1996!). In the President's Message, Lorne Crosson introduces the Prairie Soil Carbon Balance Project and describes the role the SSCA staff will have in ensuring cooperators are found and the correct data is collected. In the following issue, yours truly submitted an article explaining the methodology used for collecting the soil samples and the difference between Level 1 and Level 2 co-operators. Eligible fields had to be direct seeded for the first time in 1996 or 1997. The Sask Soil Survey crews went out to the fields to be involved in the project and took soil samples before seeding in the spring of 1997. The location from which each sample was taken was marked by an electromagnetic ball, buried well beneath the depth of cultivation. The balls enabled the crews to go back to the same locations for soil samples in 1999. And for the Level 2 fields, the SSCA staff were able to go back to the same spots in the fields to collect biomass samples of the crops in 97, 98 & 99.

Rick Stushnoff preparing to take a soil core for the PSCBP, October 1996.

Collette and Rick Stushnoff preparing to take soil samples for PSCBP, October 1996.

Meanwhile, Issue #24 (Summer 1998) examined soil carbon in much finer detail. John Bennett shared his view as a farmer on carbon sinks. At that time, he indicated that in order for action to happen, consideration had to be given to the crucial role of farmers in sequestering carbon; the remarkable contributions agricultural soils can make in achieving the Kyoto targets; and the agricultural strategies that could be undertaken at the time.

Clint Steinley, 2nd VP also submitted an article entitled "Building Canada's Carbon Bank". Clint reported on a Conference he and John Bennett had attended along with several policy makers and scientists from both Canada and the US. He and John had hoped to convince the policy makers and political leaders that prairie soils, when farmed under a reduced or no-till system with an intense and diverse crop rotation, have the potential to sequester huge quantities of carbon. At the end of the conference, Clint and John felt their efforts had been successful as the two ideas which received high priority for ensuring farmers adopted and continued to practice direct seeding were direct

CONTINUED PAGE 15

2004 Forage Fertility Project – Meacham SK

By Rich Szwydky, PAg
Conservation Agrologist

Grass and grass-legume forage stands serve an important role in providing hay and pasture-based forage for Saskatchewan livestock producers. With proper management practices and adequate precipitation, forage stands can remain productive over a period of several years. The stands eventual decline may be due to one factor or a variety of factors.

Grass and grass-legume forage stands can become sod bound, which eventually leads to a decline in hay production. To increase the productivity of old stands, producers generally break up the stand through extensive tillage and then re-seed. This approach has two major economic problems. First, there is lost productivity while the old stand is removed and the new stand is established. Second, there are high costs involved with removing and then reseeding a forage stand. In addition, extensive tillage practices followed by forage reseeding (especially on marginal soils) increases the erosion potential of the soil and poses problems regarding germination and the establishment of uniform forage stands.

One management practice that is often neglected on Saskatchewan hay fields and pastures relates to fertility. The lack of forage fertilization may lead to the decline of a forage stand. There has been significant research across the Canadian Prairies and northern Great Plains showing the benefits of forage fertilization. Although forages are known to have strong responses to fertilization, there is very low adoption by forage growers.

Forage grasses have a high requirement for plant nutrition. Proper fertility management of forage stands will improve forage yields, increase stand longevity, reduce weed competition, improve feed quality and increase water use efficiency. Supplying the correct amount of nutrients and maximizing nutrient uptake are important factors in maximizing forage production.

At present, the majority of fertility research and demonstrations focus on broadcasting ammonium nitrate (34-0-0) and urea (46-0-0). Ammonium nitrate is no longer an option to forage producers because of its unavailability and expense, while broadcasting urea has been shown to be very inefficient. Although widespread use of liquid fertilizers has increased substantially, there has been very little documentation of its use in pastures and forage rejuvenation.

In 2004 the SSCA and University of Saskatchewan soil science department undertook a project at one site that studied forage stand rejuvenation using liquid fertilizer. This project addressed the forage response to varying rates of liquid N fertilizer, and then addressed the nutrient use efficiencies of both coulter injection and dribble banding placement methods. The study was one of many projects emphasized under the national Greenhouse Gas Mitigation program to help promote agricultural best management practices that either sequester carbon or reduce nitrous oxide emissions.

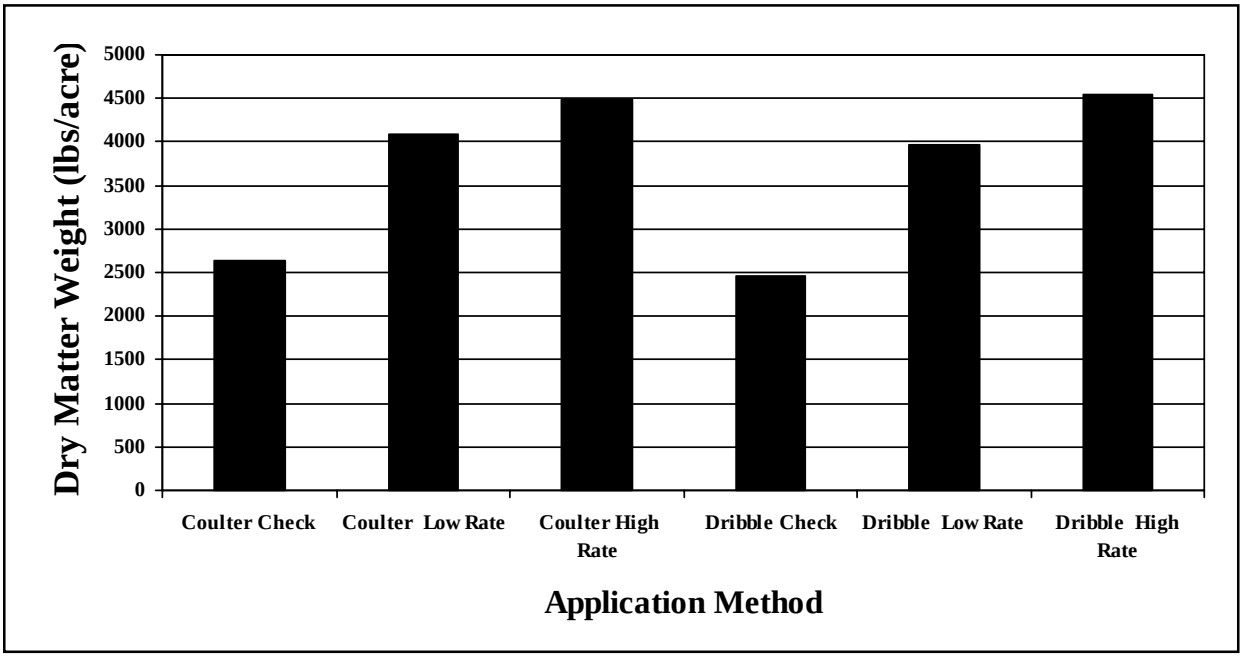


Figure 1. Effect of fertilizer application rates of 0, 50 and 100 lbs N/acre and 25 lbs P/acre, and fertilizer placement methods of coulter and dribble band on 2004 yield of meadow brome grass at Meacham SK. ($p<0.05$)

The forage fertilization experiment was conducted on Jerry Sopatyk's land northwest of Meacham. The soil at this site belongs to the Elstow association and is classified as a

CONTINUED PAGE 11

Riparian Management Demonstrations & Field Days

By Garry Mayerle, PAg
Conservation Agrologist

Demonstration sites revealing best management practices to protect and return value from riparian areas in annual cropped land are being set up in northeast Saskatchewan's Carrot River watershed. Attend one of the site tours this cropping season to find out how these practices might benefit your farm!

One of the sites will be set up in co-operation with the Northeast Agricultural Research Foundation (NARF) on land they farm in a collaborative agreement with Agriculture and Agri-Food Canada, just east of the Melfort Research Station. This site demonstrates several management practices. One is to reduce field overlap by squaring up curves along the meanders of riparian areas on creeks and more permanent waterways. With the increasing popularity of GPS guidance systems, producers are reducing overlap and the inefficiencies of doubled application of inputs. This is one more way to make those systems work better and leave a few square yards to enhance the environment. These small areas could return value to the landowner by producing commodities other than grain. One of the commodities easy to establish is forage. We are suggesting that grain farmers can gain returns from these small areas of forage by finding someone to fall graze the whole field. This also has a good fit promoting livestock production in areas that are currently focused on annual grain production. Although the landowner won't make a fortune from this activity, it may pay part or most of the property tax bill. Also, the environmental benefits, including those for wildlife are significant.

One of the trials at most of these demonstration sites is a forage species project in conjunction with SAF's rangeland agrologist Al Foster. The species he will look at are: hybrid brome, meadow brome, creeping red fescue, tall fescue, alfalfa, and intermediate wheatgrass. He will evaluate yield and feed value of these species for this kind of a grazing system. At the NARF site we will also test and demonstrate the use of NewHy RS wheatgrass to take best advantage of saline areas.

Direct seeding forages with the SSCA plot drill, June 14, 2005.

One of the most damaging events for water bodies is erosion. Erosion reduces water quality which affects the organisms living in or drinking the water. Besides actual sediment pollution of water bodies, there are also nutrients, organic matter and agricultural pesticides attached to the sediment that can pollute the water. One of the demonstrations at this site will look at erosion potential under different crop types such as pulses, cereals, and oilseeds. As well, the erosion under different tillage systems will be evaluated. We will also see how a grassed waterway protects riparian areas from erosion.

The tour at this site will be in conjunction with the Melfort Research Station field day on the morning of July 12.

Another demonstration site is just northeast of Armley in co-operation with Dean Sturby. There has been a lot of publicity on the production and long-term value of hybrid poplar. At this location there is the opportunity to view hybrid poplar establishment and several forage varieties along a riparian area. We are suggesting that even large grain producers may find some economic return for riparian areas by finding someone interested in taking advantage of these small areas for production of a saleable woody species product. Other examples are berry production or maybe even maple syrup. There will be a summer field day at this site focused on upland management of riparian areas.

The last site is in the Kinistino area in co-operation with Troy Jones. This site focuses on managing grazing in the riparian area. Plans are in process for a fall stubble grazing field day in October at this site.

Take time this cropping season to come out to one of our tours and learn more about managing riparian areas for the environment and for profit. For more details call Mitchell Japp at 953-2796 or Garry Mayerle 878-8808. ●

DIRECT SEEDING INTO GRASS FORAGE STANDS ... CONTINUED FROM PAGE 1

his seeding speed down. At 3.8 mph, the sod wasn't flying around too much and the seeds were being covered quite well. This is quite a bit slower than Gord's average annual crop seeding speed of 4.5 mph. Part of the old grass field received a pre-seed application of 0.5 L / ac of Transorb® on May 9. At that time, some of the grass plants were coming back in the 1 to 2 leaf stage. The other part of the field received glyphosate post-seed on May 14. Gord says he was very happy with emergence except where there was foxtail barley and Kentucky blue grass (KBG) patches. The poor emergence in those patches is due to the creeping rooted nature of the KBG and the deeper rooting nature of the foxtail barley. When seeding into these areas where these grass species have been terminated, the ground comes up more soddy and seed row cover becomes an issue.

The remaining acres in this quarter section were in canola in 2003. Gord used Harmony® in-crop on this part of the wheat field to control wild oats. Wild oat control was not needed on the old grass field. Gord's farm received 19 inches of moisture in the summer of 2004. Wheat yields were great with the grass termination at 46 bu / ac compared to 51 bu / ac on the canola stubble. However, the wheat from both fields weighed 54 lbs / bu and graded feed due to an early and severe frost Aug. 20th.

Gord has had experience growing a number of different forages and several legumes. One of the issues that determines which species Gord will grow is the practice necessary to terminate the stand to get the field back into annual crop production. For example, Gord had a field of hard fescue that he found could not be terminated economically with glyphosate. He made 2 passes with a tandem disc, then harrowed it smooth enough to spray and applied 1.0 L / ac of glyphosate. He is not pleased that he had to go back to tillage on this field.

He has found that brome grass will need 2 applications of 1.5 L / ac glyphosate, one shortly after harvest and another later in the fall. Likely another 1.5 L / ac will be needed the following spring as a pre-seed application, too. Because smooth brome is creeping rooted, Gord says wide openers like his do not do the best seeding job. A narrow knife opener is better and disc openers are even better. Coulters in front of knife openers would help make hoe openers work better. Because meadow brome is a bunch grass, it is easier to seed through, but it is at least as difficult to control with glyphosate. Slender wheatgrass is shallow rooted and quite easy to kill, so it is easy to terminate this grass and seed into the terminated stand next spring. Crested wheat is a bunch grass, though it is deeper rooted than the slender wheat grasses. Gord took a field of Crested wheat out of production with a total of 2.5 L / ac of glyphosate over 3 different applications over 12 months and then seeded fall rye into it. He was pleased to get a yield of 70 bu / ac on this rye field.

Gord also grows Alsike clover. This is a short lived perennial legume which Gord manages for 1 year of seed production. Prior to harvest, the clover receives an application of Reglone®. Gord usually direct seeds wheat into the Alsike stubble. The preseed burn plus using a clopyralid product for in crop weed control almost always does a good job of terminating the Alsike.

If you have a grass forage stand you are contemplating returning to annual crop production, it is possible to use low disturbance termination and seeding methods depending on the species and how well glyphosate will kill the stand. It is crucial, especially with the more difficult-to-kill species, to start to take the stand out in the fall. Beginning termination in the fall gives more time for control and more time for building soil water reserves in dry conditions. Low disturbance termination and cropping of these stands certainly enhances long term soil building that started with the establishment of the forage stand.

ABSINTH: THE PLANT THAT ADAPTED TOO WELL ... CONTINUED FROM PAGE 4

water when the leaves of the absinth are fully expanded gave 75 % control and 0.94 L/acre gave 100% control after 15 months. 2,4-D LV ester applied at a rate of 16 active ounces per acre (454 g active per acre or 1.52 L/acre of a 600 g/L formulation) gave 75% control and 32 ounces active per acre gave 95% control. Two 16 ounce per acre applications can be used; one in June and one on later regrowth if needed, to achieve similar results.

NDSU also looked at picloram, which goes by the names of Tordon 22K (240 g picloram per L) and Grazon (65 g picloram and 240 g 2,4-D amine per L) to control absinth. The lowest rate used (0.25 L/acre Tordon 22K or 0.91 L/acre Grazon) resulted in 100% control after 15 months. Higher rates progressed to 100% control more quickly than the lower rates, but it is desirable to use as little picloram as needed to achieve control. It's important to remember that Picloram is a residual and mobile compound that may move with time, so application to light soils or near water or trees is out of the question. It will also remove any legumes in the pasture and legumes may not establish in that area again for up to 5 years. It must be used sparingly."

Clopyralid or the active ingredient in Lontrel, Curtail M and others was investigated and the 0.24 L/acre rate of Lontrel was found to give 90% control. Higher rates of Lontrel did not improve the overall level of control greatly but sped control some. The equivalent of the 0.16 L/acre rate of Lontrel mixed with 2,4-D Amine at 0.45 L/acre of a 500 g/L formulation (sold as Curtail in the USA) gave 95% control, therefore it is reasonable to expect the label rate of Curtail M to provide some type of suppression for cereal and flax crops since MCPA also has activity on absinth.

Absinth is an opportunistic weed able to invade fields and pastures. Taking steps to eradicate it before it gets into the productive areas of the farm is a prudent thing to do. That will save a lot of headache and expense in the future.

For more information on absinth control, visit the NSDU website at www.ext.nodak.edu / extpubs / plantsci / weeds / w838.htm

Rego Dark Brown Chernozem. The soil texture is considered a sandy clay loam with moderate slopes and a pH of approximately 7.3.

In 2004 this field consisted of approximately an 80 / 20 split between meadow brome grass and alfalfa. Jerry had seeded this field 1998; since then, the field has been continuously hayed. No fe[illegible]r has been added s[illegible]he field was see[illegible]nd n[illegible] manure was [illegible]d as r[illegible] cattle have g[illegible] this parcel of lan[illegible] soil tests conducted in spring 2004 showed the field was very nutrient deficient.

The objective was to compare different application methods of a liquid nitrogen and phosphorous blend.

The fertilizer treatments included:

1) Coulter applied check (no fertilizer applied) - **CC**

2) Coulter applied low rate fertilizer of 50 lbs N / acre + 25 lbs P / acre - **CLR**

3) Coulter applied high rate fertilizer of 100 lbs N / acre + 25 lbs P / acre - **CHR**

4) Dribble check (no fertilizer applied) - **DC**

5) Dribble applied low rate fertilizer of 50 lbs N / acre + 25 lbs P / acre - **DLR**

6) Dribble applied high rate fertilizer of 100 lbs N / acre + 25 lbs P / acre - **DHR**

The above fertilizer treatments were applied using a coulter bar with the ability to either coulter band liquid fertilizer at a depth of 2.5" into the soil or dribble band the liquid fertilizer on the soil surface. In total, there were six treatments replicated three times to provide a total of 18 experimental plots.

The analysis of individual treatments included:

a) **Forage dry matter yield analysis -** clippings taken to determine treatment forage yield

b) **Plant tissue analysis -** conducted to determine treatment nutrient status of foliage.

c) **Light fraction organic carbon analysis -** conducted to measure changes in treatment organic carbon status as an indicator of carbon sequestration.

d) **Plant root simulators -** used to determine treatment nutrient supply rates and status at the completion of the growing season

Soil and plant dry matter sampling

In July 2004, plant clippings were taken to determine forage dry matter

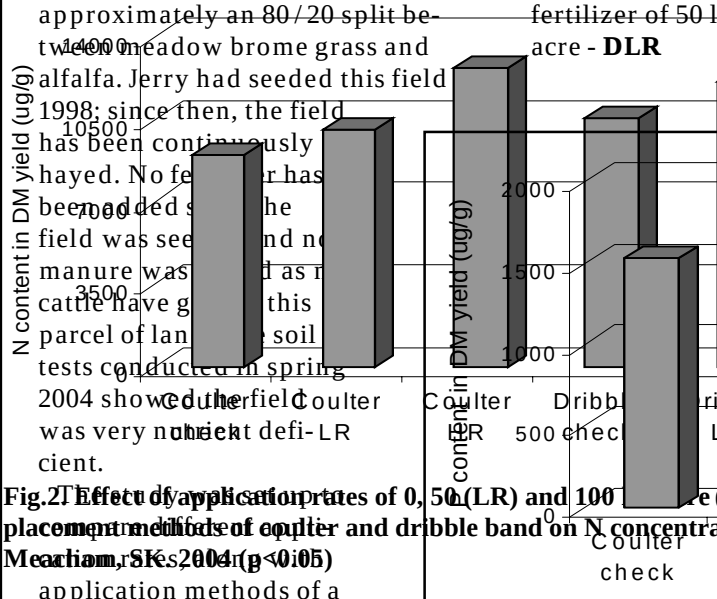


Fig.2. Effect of application rates of 0, 50 (LR) and 100 [illegible]re (HR), and fertili[illegible] placement methods of coulter and dribble band on N concentration in dry matter yield at Meacham, SK. 2004 (p<0.05)

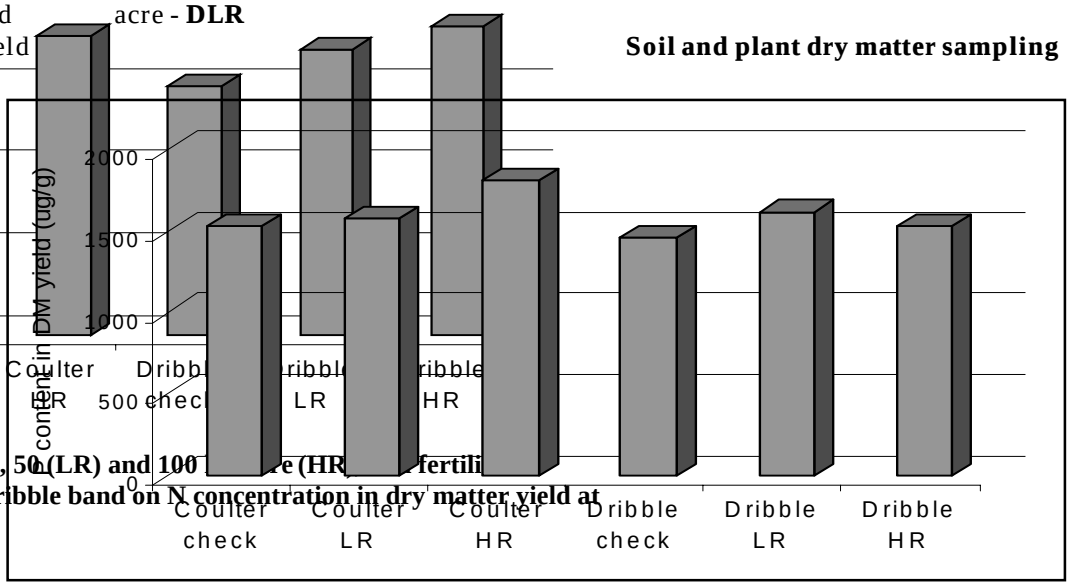


Fig. 3. Effect of application rates of 0, 50 (LR), and 100 lbs/acre (HR), and fertilizer placement methods of coulter and dribble band on Phosphate concentration in dry matter yield at Meacham, SK. 2004 (p<0.05)

CONTINUED PAGE 12

yield along with nitrogen and phosphorous concentration with each individual plot. Two-quarter meter square samples were collected per treatment. In addition, individual treatment soil samples were taken in fall 2004 to evaluate the effect of fertilizer treatments on the soil organic matter fraction and the soil nutrient release rates.

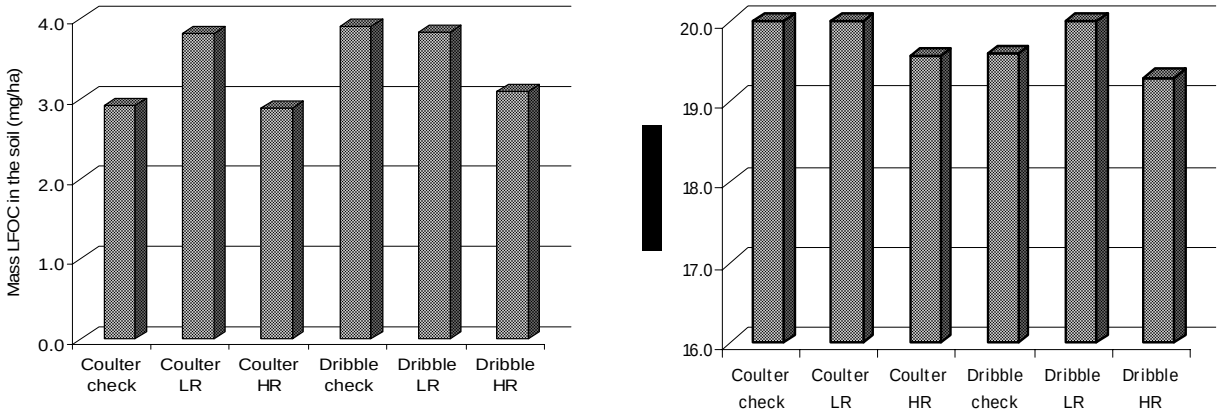


Figure 4. Organic carbon content in the soil and percentage of total carbon in organic matter. Meacham, SK 2004 (p<0.1)

Results and discussion

Forage dry matter yield analysis

The addition of N and P fertilizer produced significantly higher forage dry matter yields than the controls in which no fertilizer was added. (Figure 1) The high application rate of 100 lbs N / acre and 25 lbs P / acre produced the highest yield, with a 70% yield increase over the unfertilized control. The largest incremental yield, however, resulted from the low fertilizer rate of 50 lbs N / acre and 25 lbs P / acre. The low fertilizer rate treatments provided a yield increase of approximately 58% over the unfertilized control. All treatments showed positive responses to added fertility.

There was no significant difference between the two application methods for any of the fertilizer treatments. The yield response from surface dribble banding of the liquid fertilizer was similar to the yield response from coulter injecting the liquid fertilizer. In fact, a rainfall of about one inch, two days after fertilizing the forage plots, moved the nitrogen dribble banded on the surface into the rooting zone. This would be the reason why dribble banding the liquid N on the surface compared favorably to coulter injecting on this particular site.

Plant tissue analysis

Plant tissue analysis was conducted to determine if fertilizer application had a positive effect on nitrogen and phosphorous concentrations in the plant. Figures 2 and 3 reveal significant differences among fertilizer application rates and application methods. In general, the nitrogen concentration (Figure 2) and level of protein in the dry matter increased with increasing rate of application, and was greatest with the high rate of fertilizer. This is a good indication that application of N increased forage quality by increasing protein.

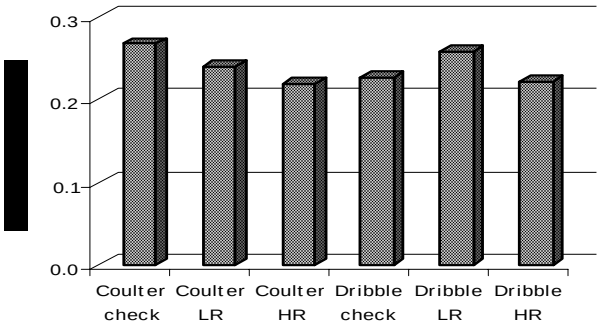


Fig.5. Supply rate of soil Ammonium (NH_4) determined by PRS probe analysis (p<0.1)

Comparisons between application methods showed that the mean nitrogen concentration in the dry matter yield was generally higher in the dribble-applied plots than the coulter-applied plots. The differences in application methods were relatively insignificant. It is possible, however, that the coulter pass could have caused some plant injury that either slowed or reduced the plant growth and therefore resulted in lower plant N concentrations. A second theory could be that the coulter pass caused enough soil disturbance to increase water evaporation from the soil.

The P concentration in the plant tissue (Figure 3) revealed that the P content was significantly higher in the coulter applied high rate treatments versus the dribble treatments and the checks, which received no fertilizer. Comparing the surface dribbled P to the unfertilized checks showed no significant differences. This study indicates that because of the lack of phosphorous mobility in the soil the uptake of P is more efficient when

CONTINUED NEXT PAGE ...

the phosphorous is applied with a coulter into the root zone versus dribble applying it onto the surface.

Light fraction organic carbon (LFOC) in the soil

Light fraction organic carbon (LFOC) measurements were analyzed to determine any changes in the organic carbon content. The LFOC is the intermediate stage of decomposition of plant residue within the soil organic matter. Through past research by Malhi et al., it was found that organic carbon is a sensitive indicator of changes within the soil profile (such as repeated fertilizer applications). An increase in soil organic carbon is indicative of increased top growth production as a result of several fertilizer applications. The increased yield production correlates to an increase in plant residue and root biomass, which in turn, would then correlate to an increase in organic carbon levels. Typically research has found that LFOC increased with fertilizer applications applied over a period of several years.

In our study at Meacham, the LFOC and total carbon measured in the top three inches did not show any significant differences among fertilizer treatments (Figure 4). The indication is that a single fertilizer application made in 2004 may not be capable of producing a significant increase in organic carbon, and that repeated fertilizer applications over several years may be required to increase soil organic carbon content.

Supply rate of anion and cation in the soil

The Plant Root Simulator (PRS) probes were used to measure the supply rates of ammonium (NH_4) and nitrate ($N0_3$) ions to the roots within each individual treatment. (Figures 5 and 6) Ammonium and nitrate are both forms of nitrogen that plant roots can absorb. The ammonium form of N is a relatively immobile form, while the nitrate form of N is very mobile and subject to major leaching losses in wet soil moisture conditions.

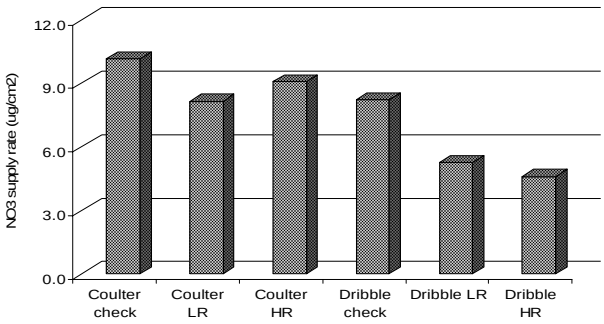


Fig.6. Supply rate of soil nitrate (NO_3) determined by PRS probe analysis ($p<0.1$)

To conduct this experiment, individual treatment soil cores were taken from the centre of each plot in the fall and taken back to the lab where the PRS probes were inserted for a two week period. The results indicate there was no significant residual effect from any fertilizer treatment on soil available ammonium or nitrate N supply rates. This indicates the nitrogen applied in the spring was utilized by the plant material, immobilized, or lost from the system. Judging by the significant dry matter response, we could assume that plant nutrient recovery from spring fertilizer applications was very efficient and very little N was lost from the system.

Conclusion

In the Meacham trials, excellent responses were observed to added fertility - with both rates of nitrogen and with both application methods. The site received approximately eight inches of rainfall during the growing season. The excellent growing conditions facilitated nutrient recovery and uptake by the plant roots, which resulted in significant dry matter production. Given the current price of fertilizer and hay, the most economical application rate was for 50 lbs of N / acre even though further positive dry matter responses were observed with the 100 lb nitrogen rate. However the increase in dry matter production with the addition of 100 lb N / acre occurred at a decreasing rate. As for application method, no significant differences existed in dry matter production between dribble versus coulter banding of liquid fertilizer.

I would like to acknowledge Dr. Jeff Schoenau & Delgermaa Chuluunbaatar of the Soil Science Department, University of Saskatchewan, for doing all of the analytical work required to complete this project and for composing the literature review.

REQUEST FOR SUBMISSIONS

Do you have ideas or comments on the conservation of our land resource? We would like to print them in future issues of the Prairie Steward. Pertinant photographs would be appreciated. Please forward to:

The Prairie Steward
c/o SSCA
Box 1360, Indian Head, SK, S0G 2K0
Fax: (306)695-4236
E-mail: info@ssca.usask.ca

CLC Showcasing New Varieties and Products

By Laurie Hayes, Msc PAg
Manager, Conservation Learning Centre

The crops are finally in the ground (following a few rain delays even though the rain was welcome), with only a few demonstration plots yet to seed. So, seeding is finished late but hopefully rain will be more timely in its presence and frost more timely in its absence this year!

We have had strong support from our industry partners this spring (as usual!) and are able to showcase a number of new varieties and products:

- *Canola*: 45H72 CL (Proven Seeds); SW9803 RR and SW6802 RR (SW Seed); 624 RR (Brett-Young); Prairie 719 RR (Prairie Seeds); 1896 RR and CS 7001C RR (Canterra Seeds); v1030 and v1031 (Cargill Specialty Canolas)
- *Seed treatments*: Gemini (BASF) and Raxil-T (Bayer)
- *Herbicides:* Triton and Refine Extra SG (both DuPont)
- *Novel crops:* Fibre flax (Biolin Research); lentils (BASF); pinto beans (University of Saskatchewan), soybeans (Monsanto), herbs and spices
- *Perennial and annual forages:* PC rye (Agriculture and Agri-Food Canada); Glacier orchardgrass, Riding tall fescue, PS 200 hybrid alfalfa, Stockwell alfalfa, Crown annual ryegrass, Royal Italian ryegrass and turnips (Prairie Seeds); Cowboy barley (SeCan); NewHy RS wheatgrass (Proven Seeds); Dakota switchgrass, Goliath crested wheatgrass, SW Bamse reed canary grass (SW Seed)
- *Fruits:* Dwarf sour cherries (5 varieties); blue honeysuckles (3 varieties)
- *Equipment:* ART120 seed population monitor (AgTron)

Check our website at **www.conservationlearningcentre.com** for a complete list of our projects for 2005.

FIELD DAYS:

- Canola Field Day – 9:00 am, Wednesday, July 13, 2005
  - Topics: new varieties, marketing, nutritional aspects of canola and flax.
- "100 Years in Agriculture" – Annual General Tour – 9:30 am, Tuesday, July 19, 2005.

Morning:

Presentations on fruit and other tree projects.

Workshop: Maximizing the use of your GPS.

Noon:

Lunch and the 100 years of machinery exhibit.

Afternoon:

Concurrent tours of field and plot projects.

- Riparian Management Tours – Dates to be determined – Tours will be in the Melfort, Kinistino and Armley areas

In addition to the public tours, the Board of Directors from Agriculture in the Classroom (Saskatchewan) and the WTO Negotiating Committee from the Chinese Ministry of Agriculture will be visiting the CLC. The CLC is also a partner in organizing a Forest Grazing Workshop ("Technical training on forest and riparian assessments") on Tuesday, July 19 and Wednesday, July 20 whose participants will also tour the CLC.

We will also be presenting some workshops over the fall and winter months:

- "Demystifying the Environmental Farm Plan: The CLC's Experience" – Fall 2005. The CLC has completed its environmental farm plan — identifying potential risks, developing action plans and going through the peer-review process. We have also submitted a proposal to get funding to implement some our action plans. The workshop will cover our experience in going through the process and we will have experts on hand to answer questions about water and well management, pesticide, fertilizer and petroleum product storage, nutrient management and riparian management. These are just a few of the areas that we had a difficult time trying to find information that we needed to make appropriate assessments and plans. It will be an open, honest discussion of some of the challenges we face in trying to implement beneficial management practices in keeping with our mandate of continued environmental stewardship. We soon found out that some things you just can't fix. Stay tuned . . .

- Crop Talk 2006: With the dismantling of SAF's Extension Division, SSCA and the CLC have undertaken to ensure that this successful series of seminars in northeast Saskatchewan continues. Plans will get underway in October, with input from our sponsors, on topics and speakers. Keep posted .
- Workshops on alternative management techniques for riparian management
- Workshops to develop communication and health assessment skills for staff working in the areas of native, tame, and forest pastures as well as riparian areas.

The school program continues its success with approximately 850 students participating this spring.

We hope that you will be able to visit us some time this summer – whether it is during an organized field day or not. To arrange a tour, please contact us at 306-953-2796 or by e-mail at *sask.soil.conservation.assoc@sasktel.net*.

The Conservation Learning Centre is grateful to its partners, sponsors and supporters and the funding agencies that support its programs and projects.

SSCA & SOIL CARBON: IT'S BEEN A LONG ROAD ... CONTINUED FROM PAGE 7

technical assistance for farmers and enhanced education for farmers. Clint indicated that by the end of the conference, "the farmers' crucial role in this whole soil carbon sequestration scenario was much better understood by the scientists and policy makers".

John Bennett was feeling particularly eloquent in that issue submitting a second article outlining how the SSCA, together with other soil conservation groups from the other provinces and the Soil Conservation Council of Canada, had been very active in ensuring farmers' contribution to reducing greenhouse gas emissions would be recognized by government. He encouraged all SSCA members to write to a number of elected provincial and federal representatives outlining the importance of farmers in the successful creation of ag soil sinks.

Glen Padbury searching for a sample marker, June 1997.

I believe since Issue 24, we have had at least one article on soil carbon in every issue of the Prairie Steward. And of course, carbon has been discussed at great lengths at our Conferences. Remember how excited everyone got when one of our speakers at the 1999 Conference suggested that our sequestered carbon could be worth as much as 5 cents per pound?

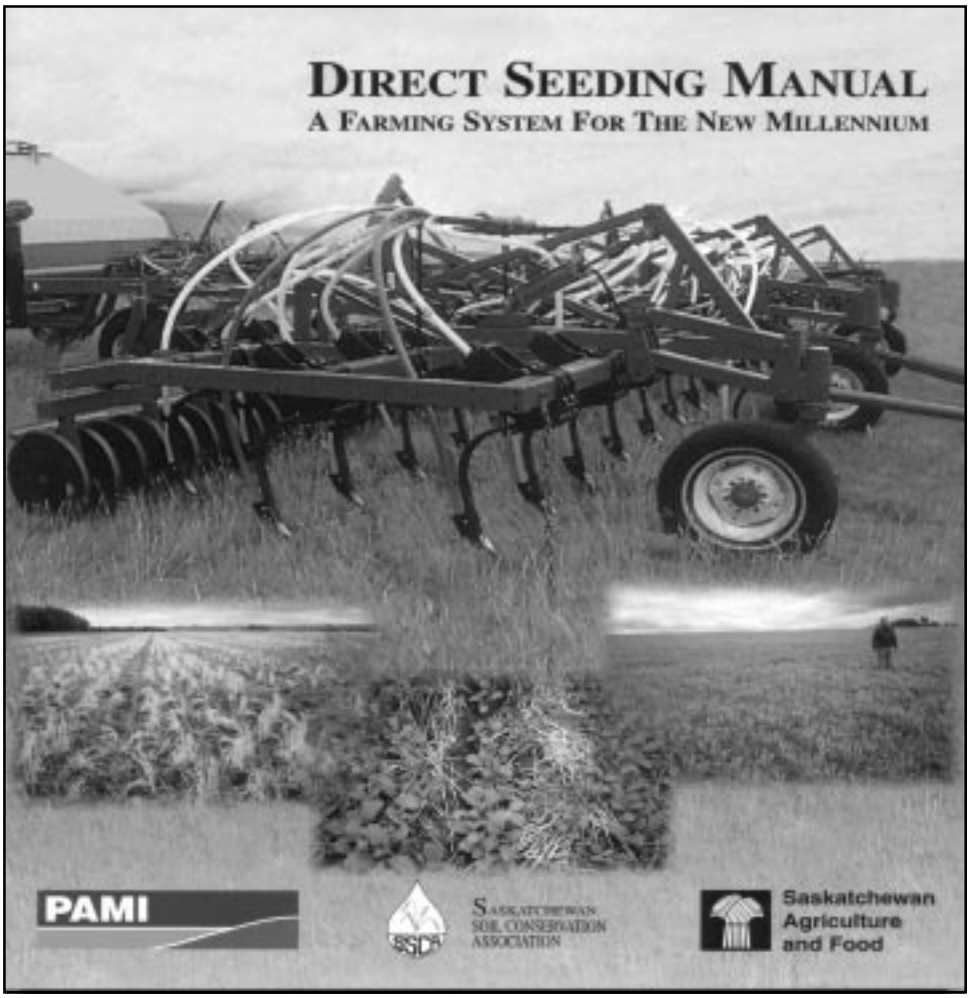
Getting back to the Prairie Soil Carbon Balance Project. Soil samples were taken in 1999 and they were analyzed along with the samples taken in 1996-97. A report came out in 2000 entitled, *Prairie Soil Carbon Balance Project: Producers, Industry and Government working together to Quantify and Verify Changes in Soil Carbon Stocks from Better Agricultural Practices*. (A summary of this report was presented by Garry Mayerle at the SSCA's 2001 Annual Conference. His presentation is in the 2001 Conference proceedings found on the SSCA website: www.ssca.ca). As was expected, **under direct seeding, we saw an increase in the soil carbon**. I've taken a few of the comments from the report's Project Accomplishments section and listed them below:

The collaborative Prairie Soil Carbon Balance Project has shown that good land stewardship is sound environmental policy. Everyone benefits from improved management of crop land and pastures: farmers, the environment and society.

The project documented the positive contribution of Canadian prairie farmers to the world-wide effort to reduce greenhouse gas emissions… .

…The exact details of how agricultural soil sinks will be credited and the rules governing any trading of credits from carbon sequestration are being actively debated.

I'm betting that in 5 years, it will be even more interesting to reflect upon where the "carbon road" has led not only the SSCA but also Canadian farmers. Over the course of these next few years, the carbon trading wrinkles will be ironed out, Kyoto will come into effect January 2008 and a value will be placed on the stored carbon. Past and present Board members should be proud of the work they have done in monitoring and lobbying on behalf of farmers to ensure policy related to carbon enhances the bottom line at the farm gate. Carry on!



Celebrating Rural Roots

By Naomi Paley, PAg
Livestock Development Specialist, SAF

Saddle up pardner and get ready for a rip snortin' good time in Yorkton this summer. The first annual Yorkton Cowboy Festival will be riding into town on August 13th & 14th.

"The festival will include two days of action packed events including a ranch rodeo, western art & gear show, cowboy poetry & western music talent stage, western music concert and ranch roping and reined cow-horse competitions," explained one of the event's organizers Stu Cairns.

Although this event is a new one to the Yorkton area, Cowboy Festivals are very popular in Alberta, where Cairns and several others on the organizing committee have migrated from in recent years. "It was something we were familiar with back there, and we sort of saw it as a gap we can fill here," he said.

A recent release from the Sask Trends Monitor stated that from 2001 to 2004 "the migration of out-of-province farmers to the Yorkton / Melville area has become evident in the statistics." Cairns also noted that "over the past three to five years the entire East Central Region of the province has seen a significant immigration of ranching families from Alberta and British Columbia. This trend has been due to the economic benefits associated with the very reasonably priced land in our part of the province that is especially suited to ranching and beef cattle production."

"This influx of new people with a ranching background to our region has been a positive experience and one that we the community would like to celebrate," explained Cairns. "Looking back into our history prior to the traditional grain farming era, ranching and the life of a working cowboy were really some of the original beginnings of agriculture in Saskatchewan; and the Yorkton Cowboy Festival is an event that will highlight and celebrate this history and heritage." "Overall," said Cairns, "The Cowboy Festival is really an event aimed at the further development of a 'ranch culture', to foster a spirit of western living in the Yorkton area, and attract tourists and economic activity to our region."

The two day festival will feature a number of events, one of which will be the ranch rodeo. Based on the everyday activities and chores of the working cowboy, the events in the one-day ranch rodeo will provide spectators with an opportunity to view and appreciate the skills and finesse involved in handling ranch stock efficiently and effectively.

A western art & gear show will also be part of the two-day festival, highlighting local and other artisans from saddle makers to silver smiths and western artists & crafts people. In addition, the art & gear show will be set up around a western music and cowboy poetry talent stage, where people can take the microphone to sing or recite cowboy style prose about "hoss tradin' and ridin' the trail".

Saturday evening will showcase a western music concert which will be held at St. Mary's complex. Performers from Saskatchewan and Alberta will entertain the crowd with western tunes and perhaps even a bit of yodeling, sure to get your toes tapping.

Cairns said that they want the festival to be as cowboy-oriented as possible, but he added that they expect the general public will attend the event because so many seem to appreciate the cowboy way of life.

For more information on attending or participating in the events of the Yorkton Cowboy Festival you can call 782-2108.

http://www.ssca.ca

Publication Agreement No. 40065736