



Prairie Steward

Farming For Your Future Environment



The Newsletter of the Saskatchewan Soil Conservation Association Inc.

Summer Issue No. 48, 2006

Plan Spring Management of Chem Fallow in the Fall

By Eric Oliver, PAg
SW Conservation Agrologist

Fallow acres in Saskatchewan have dropped dramatically over the past 15 years, largely due to direct seeding and producers using more diverse rotations.

However, for the 2006 season, I suspect the fallow acres will increase. The reasons vary somewhat; some areas will increase fallow because the soil is too wet to seed. In other areas, such as the southwest, fallow is more commonly found as a risk management tool. However, the most significant influence

resulting in increased fallow acres for this year is the almost across the board low commodity prices. Inputs remain very high and profits are made at every level in the food chain - except at the farm level. The sad fact is that for many producers, fallowing will lose less money than growing most crops.

spread properly. Sometimes one doesn't plan on chem fallowing for reasons mentioned above. However, I encountered several calls this year on how to seed a chem fallow field that had tall stubble and/or lots of long straw residue that was poorly spread. Unless you have a direct seeding disc drill,

trying to seed through tall chem fallow will be an exercise that will try your patience at the very least and will likely enrich your vocabulary.

Over the course of the year of fallow, the stubble will rot at the base where the straw touches the ground



With the price of fuel at record levels, the majority of fallow acres will likely be chem fallowed. Although chem fallow is a very good soil conservation technique and is a much better practice than tilled fallow for greenhouse gas reduction, a problem can arise when tall stubble is left and residues are not

surface. This makes for very weak stubble that is easily broken off at the soil surface when a seeding implement passes through it. If the stubble in the chem fallow is very tall it tends to break off and can plug seeding machines, especially those using C-shanks. Even if

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Current Issues with SSCA

By Blair McClinton, PAg
SSCA Executive Manager

Funding

The past year has been a frustrating one for the board and staff. This past winter, SSCA issued layoff notices to our five field staff. Fortunately, SSCA was able to cancel the layoffs after funding for a national project developed by the Soil Conservation Council of Canada (SCCC) was approved at the 11th hour. The project titled, "Canada's Agricultural Producers Addressing Environmental Issues," provides us with staff funding for six months. SSCA was not alone with the funding crunch; similar groups in all 10 provinces were facing similar cutbacks. Doug McKell, SCCC's Executive Director, worked tirelessly over the past year with several senior AAFC and PFRA officials to ensure this bridge funding was in place to help us maintain our staff while new longer term programming is developed. Without their efforts, this newsletter would have had a much more somber tone.

With the change in the federal government, there has been a great deal of uncertainty on how the federal government plans to address climate change and other environmental issues. While the government has stated that Canada will stay in the Kyoto Protocol, the previous govern-

ment's plan was cancelled and will be replaced with a new plan sometime this fall. All the work on the offset system has also been caught up in this. SSCA is very confident that an offset system will be part of the new national plan. However, it will likely have some differences from the system that was under development under the Liberals.

While I was pleased that we were able to access some federal funding, I am equally disappointed in the response we received from the provincial government. Provincial budget documents identify maximizing "the benefit to Saskatchewan farmers as the Climate Change Plan for Canada is implemented" as a "Key Action" item under Environmental Stewardship for Saskatchewan Agriculture and Food in their "2006-07 Performance Plan." However, our proposal to maximize the development of agricultural offset credits in Saskatchewan was not accepted. SAF's response to us was that funding for climate change would have to come from Saskatchewan Environment. **It seems strange that SAF does not allocate resources to fund an item listed as a key action area in a budget document.**

PERRL

This past year has been a major learning experience for SSCA around the issues surrounding carbon trad-

ing. The year was very successful. Our claim was accepted without any major issues. By the end of June, we expect to be paid by PERRL for the 2005 year.

Checks will then be sent to our cooperators within a few weeks.

For 2006, SSCA added 30 additional farms to our group of cooperators. These were producers who applied to the program last year but we were unable to accept due the small size of the project.

Over the past year, the ISO-14064 standard for greenhouse emission reductions or removals was released. Over the next year, SSCA will be working to make our PERRL pilot trade project meet the requirements of the ISO-14064 standard. This standard will likely be required for any future offset system. **Having a good working knowledge of the ISO-14064 requirements will be an important asset to SSCA as we move forward on this issue.**

Direct Seeding Conference

At a planning meeting in spring, SSCA decided to make major changes



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SSCA Works for its Members in Spite of Challenges

By Edgar Hammermeister, PAG
SSCA President Elect

The SSCA continues to be in challenging times. Upon being introduced as the new President of our Association at our annual conference banquet, my first duty was to proudly introduce the re-organized Board of Directors and our long serving staff. My second duty was to announce that our staff was receiving layoff notices effective April 1 barring any new funding announcements - a sobering duty at a time when one should be celebrating. In late March we received a brief funding reprieve. **The SSCA through our national association, the Soil Conservation Council of Canada, has received an extension (6 months working on 12) to our primary funding program under the *Canada's Agricultural Producers Addressing Environmental Issues* program. Federally, government officials recognized the need for continued promotion of conservation Beneficial Management Practices (BMP) and maintaining the infrastructure that exists in our staff until new project priorities could be identified.** The funding extension provides another opportunity to provide field demonstrations and meetings on improving crop management strategies that also

reduce green house gas emissions. Farmers will also receive the most current information on the developing carbon credit trading system.

Provincial support is another story. **Both Sask Ag and Food and Sask Environment rejected an SSCA proposal that would have complimented the Federal project. The Province's lack of commitment to improving the agriculture industry and aiding in producer education is frustrating** (to say the least).

The job of is not finished. Saskatchewan has only about 50% adoption rate of direct seeding. New and evolving BMPs on crop fertility and forage management are being identified and need to be communicated. **And farmers continue to be approached to sign onto carbon contracts** where, to date, no trading system structure, rules, values or liabilities have been established. **Farmers who sign on at this stage are definitely signing onto a very open ended contract.**

Briefly on the carbon trading system, the change in Government has put the development of Canada's Offset Trading System on hold. The Conservative Government intends to put

its own stamp on all significant federal policies. Dealing with Canada's commitment to the Kyoto Protocol was not on the "Top 5" to do list but is receiving attention now. Details are few and far between at this point. **The SSCA is monitoring developments closely and will inform our members of key developments.** An excellent opportunity to have received an update was at the Andy Schmitz "Farming for Profit" Conference at Moose Jaw June 23 and 24.



The SSCA focuses on providing independent, science based information to producers, in the interest of producers. The importance of the independent nature of our organization is ever more important during trying times. **Producers depend on us for objectivity and integrity and we stand by the science (despite outside pressures).**

Good luck with the rest of the growing season! ●

CURRENT ISSUES WITH SSCA... CONTINUED FROM PAGE 2

to our annual conference format. Since 1990 (that's as far as I can recall), the SSCA's annual conference has included both a conference and trade show. Over the years, this event grew to become one of the largest agricultural conferences in Canada with attendance in the 1200-1400 range. The trade show also grew in size at the same time which made major restrictions on the types of facilities that could host the event. While the very large exhibition facilities suited us well for many years, the conference has become

smaller over the past few years and we wanted to use a facility better suited to our needs. So, this coming February, our next annual conference will be held at the Saskatoon Inn. While we will continue to have a trade show, it will be limited in size due to space restrictions.

We are also dropping "Direct Seeding" from the conference title. Our conference for many years has been about more than "how-to direct seed." Our conference has always been about helping producers farm more effectively. In the early years this meant

how to switch to a direct seeding system. As direct seeding became more common, our conference adjusted itself to help producers who had already adopted direct seeding to become more effective with the new management system. Our conference had in effect become Saskatchewan's premier crop production conference. While direct seeding will always be a part of the event, it won't necessarily be the main focus. At the end of the day, **it's all about helping producers become better farmers and better stewards of the land.** Have a great summer! ●

Perennial Sow-Thistle Control

By Rich Szwydky, PAg
WC Conservation Agrologist

Perennial sow-thistle continues to be an aggressive weed that many producers attempt to get under control. This weed has adapted to a wide range of conditions, however it flourishes mostly in fertile moist soils receiving full sunlight. Many producers that have switched to direct seeding claim to see an increase in perennial weeds such as sow-thistle and that the challenges of controlling this weed have increased. In a North Dakota study, densities of 14 and 27 shoots per m² have reduced spring wheat yields by 15 and 45% respectively. Sow-thistle will not only affect yield; it can also affect crop quality where its presence can slow harvest, and increase grain drying costs and dockage.

The 2003 weed survey conducted by Ag Canada in Saskatoon and SAF shows that in Saskatchewan perennial sow-thistle is ranked in relative abundance at # 17 among all weed species. Its

relative abundance varies across Saskatchewan soil zones from light to moderate infestations. Clark Brenzil, weed specialist with SAF, says that even fields with lighter perennial sow-thistle infestations have been shown to reduce yields significantly as they compete with the crop for resources.

Perennial sow-thistle is often confused with spiny annual sow-thistle, however there are a number of distinguishing characteristics that can be used to differentiate between the two weed species.

Perennial sow-thistle has a creeping root system. The plant will reproduce by seed and/or by rhizomes. Other biological features of perennial sow-thistle include a growth habit of up to 2 m tall. The stems are erect and upright and will exude a milky juice when cut. The leaves are arranged alternately on the stem and have triangular backward

pointing lobes with small spine-like serrations on the margins. The plant produces loose clusters of bright yellow flowers as large as 2 inches in diameter, which are borne at the end of the stems. A brown leathery seed is produced which contains a feathery pappus or tuft of fine white hairs on one end.

Spiny annual sow-thistle (SAS) has a short taproot and reproduces by seed only. The plants are usually shorter and have deeper lobed leaves than the perennial plants with large prickles at the margins. Brenzil states that while



Perennial sow-thistle has triangular, backward pointing lobes with small spine-like serrations on the margins. All parts of the leaf are flat. Photo courtesy of SAF.

SAS also produce a loose cluster of bright yellow flowers, these flowers, however, are distinctively smaller (3/4 – 1 inch in size) compared to the flowers produced on perennial sow-thistle plants. SAS leaves also have large basal lobes that clasp the stem while basal lobes are minor in perennial sow-thistle. Perennial sow-thistle leaves are relatively flat while the lobes of SAS will present at an angle to the centre vein of the leaf

So why are many direct seeders finding perennial sow-thistle control to be such a challenge? Some producers say it is even more difficult to get under control than Canada thistle. Brenzil says there are a number of reasons for their claim. Perennial sow-thistle has adapted well to Saskatchewan conditions. The perennial nature and the ability to spread both by rhizomes and by seed make it difficult to control.

Once the plant is established, it competes very well with the crop for resources.

Perennial sow-thistle has significantly greater seed production than Canada thistle. Each flower on the sow-thistle plant has the capability to produce 20 – 40 viable seeds per head.

Brenzil states that because the feathery pappus, a mechanism for wind dispersal, is bound so much more tightly on the sow thistle seed versus the Canada thistle seed, the sow thistle seed has the potential to blow further away from the source each season. With the greater seed mobility, fields are more likely to have an even distribution of sow-thistle plants across the field. In contrast, Canada thistle is less successful reproducing by seed and will tend to have a patchier establishment throughout the field.

Secondly, perennial sow-thistle plants often emerge over a longer period of time than Canada thistle plants. The plants will start to emerge from root buds in early spring and continue to emerge into early summer. Seed germination does not begin until the soil has warmed (mid to late May). Seedlings survive best in areas of protective cover or litter and high moisture. Seedlings will also emerge in the fall if adequate conditions are available for germination. Fall seedlings over winter in the rosette form. Because of the variable emergence, producers may miss windows of perennial sow-thistle control. Brenzil states that plants could emerge and establish well after producers have completed post emergence spraying.



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Black Medic: Friend or Foe

By Juanita Polegi, PAg
Assistant Manager & SE Conservation
Agrologist

One of the best things about this job is that there are always surprises. For instance, in early May I was visiting the SE corner of the province where a farmer indicated that in 2005, black medic had moved into a field creating some competition problems with his crop. He asked me if I had encountered problems with that weed before. I answered that although around Yorkton it seems that black medic is everywhere, especially where there is grass, I had never before heard of anyone having problems with it in the field. Upon doing some research, I discovered that now and then, in times of good moisture, black medic can rear its little head.

Black medic (*Medicago lupulina* L.) is a low growing annual legume, closely related to alfalfa, which originated in Eurasia. The little yellow flowers of black medic are arranged in a dense, head-like raceme. Only one seed is produced in a dense, rigid pod. The root produces several branches and from these, a dense mat of stems and leaves is formed. Some of the stems can extend to 2 feet in length. It's this dense mat of vegetation that can create problems for annual crops

Clark Brenzil, Provincial Weed Control Specialist, Saskatchewan Ag & Food says that while few herbicides are registered for control of black medic, several have potential. Mecoprop is registered for application at the 2 - 4 leaf stage. Although not registered, limited research indicates that products with clopyralid have the potential to work well on black medic considering medic's close relationship to alfalfa for which Lontrel is a registered control. Limited research indicates that non-registered treatments containing dicamba + phenoxy, Muster, Refine Extra + 2,4-D, dichlorprop + 2,4-D, or glufosinate show potential for control in registered crops, but further work is required.

Mild winters with lots of snow cover have proven to be ideal for black medic to over-winter. Over wintered plants may need an application of greater than 1 L/acre of glyphosate in the spring for control.

Brenzil indicated that black medic prefers moist conditions, however with its long seed dormancy (10 - 11 years), it can withstand several years of drought. When moist conditions are favourable for heavy emergence of black medic, the seeds have lost dormancy yet persisted ungerminated during drought periods.

If the population of black medic is sufficient that it interferes with



Black medic. Photo from Virginia Tech Weed ID Guide

annual crop production, then it is most definitely a plant that needs to be controlled. But the mere presence of black medic plants in a field or pasture doesn't warrant immediate action. In fact, in many instances, black medic is seen as a beneficial legume and not as a "weed" at all.

Dr. Martin Entz and Leanne Wilson, a Masters student from the Faculty of Agricultural & Food Sciences, University of Manitoba, examined the role black medic may play as a cover crop. A cover crop helps to reduce soil erosion and improve weed control while a cash crop is growing. A leguminous cover crop also fixes nitrogen. Black medic can do all of

these. It also has the ability to self-regenerate. Self-regenerating crops are seeded only once and then they "seed" themselves year after year. The

only problem with black medic is that its seeds don't break dormancy easily due to the impenetrable seed coat.

To gain a better understanding of what triggers black medic seed to break dormancy, Wilson and Entz placed little pouches of black medic seed in the fall of 2003 at Indian Head, Lethbridge and Winnipeg. A few pouches were removed each month and analyzed as to whether or not seed dormancy was broken. It appears that the breaking of dormancy is soil temperature related. In fact, a 2 stage process is required in order for the seed coat to soften and dormancy to break. While more research is required on how to manage black medic in a cropping system, it has the potential to contribute to annual crop production.

Researchers continue to document benefits of Black medic in no-till continuous cropping systems. A collaborative project between Guy Lafond and Bill May of Indian Head (AAFC) and Martin Entz and MSc students Soliel Turmel and Sumi Nagulswaren (University of Manitoba) is addressing two questions: 1) How much N does the medic understory crop supply to grain crops; and 2) Does the presence of medic increase P uptake and mycorrhizal colonization of flax. The research is funded by the Western Grains Research Foundation with matching funds from NSERC and the Manitoba Government.

In most years, black medic is an innocuous plant, growing in grass and busily fixing nitrogen. In years when its population explodes, it can create problems in an annual crop.

And as a cover crop, it has definite potential. Black medic: friend or foe? That depends on where it's growing and how. ●



New Director-At-Large Welcomed

By Garry Mayerle, PAg
NE Soil Conservation Agrologist

The Saskatchewan Soil Conservation Association is pleased to announce that Ernest Hall has been acclaimed Director-At-Large. Ernie replaces Wayne Katerynych from North Battleford who stepped down from his position due to health reasons.

Ernie farms with his brother Norman just north of Wynyard between the Big Quill and Little Quill Lakes. They seed 4000 acres and run some cattle to utilize the forage from areas where annual cropping does not make sense. Ernie says this farming area is productive and often, when the rest of the world is making ruts, they are not too wet; and when there is a big drought, they often have moisture. However, he lists 1987, 88 & 89 as an exception. He comments that Dr. Al Slinkard from the U of S once told him that the lakes created a micro climate with enough heat units to make corn production successful.

When Ernie started farming in the family farming operation in 1975, his father was summerfallowing half to a third of their acres. Ernie very quickly became concerned about water erosion and the trench cutting and soil washing that often took place during spring runoff. He also soon realized that the only reason to summerfallow was to control weeds and he felt he could do that with herbicides. Within 4 years of starting to farm, Ernie had reduced tillage to a minimum by knifing in anhydrous ammonia in the spring or fall, then using cut-off sweeps to create a seed bed layer that double disc press drills would seed into. Of course they still had to till where quack grass control was needed.

The Halls were so familiar with reduced till farming that they made a complete farm switch to zero till in 1991 with the purchase of a Great Plains Drill. The next seeding equipment change was to a Harmon. After working out all the bugs, they currently are running a Harmon 52 foot with 12 inch spacing using dry fertilizer.

Ernie says they have no problem with residue management or soil warming. They run Gleaner harvesting equipment so the straw is well chopped and they don't need to harrow. One of the unique opportunities that the Hall brothers have is a contract to dispose of 6000 T of chicken manure a year. They apply it at about 8 T/ac on any one

piece of their land every 7 or 8 years. Some goes on about 60 ac in the spring before seeding. Some goes on later in the summer after a green feed crop has been baled or later in the fall after harvest. Ernie says one of the results of this extra fertility is healthy plants with better "built in" disease resistance. But another result is also often lots of straw. The Halls will cut cereal straw with stubble 18 inches high. With the 12 inch spacing on their drill, there is no problem seeding through this tall straw. They also chop and spread flax straw and Ernie says the earthworm population breaks that down so well the following growing season, that even wads of flax straw are gone by harvest.



Ernie Hall

The Hall brothers enjoy spending time in the shop rebuilding equipment. The 800 Versatile they pull the drill with started out as a 250 hp tractor. The drive train and cooling system are able to handle more horse power so the Halls installed a 350 hp truck motor converted to an ag application. They tripled the 18.4 x 38 tires and put full fluid in the inside 2 tires. This older tractor now handles their 52 foot air drill and 310 bu air cart in their rolling land without any problem.

Their weed control equipment has also spent a lot of time being refitted. Their Terra-Gator 3 wheeled floater has a 1000

gallon tank and they have used several drag-behind booms. Just last winter they fitted it with an Ag Shield 100 foot floating boom with auto height control. Ernie has a Site Winder GPS guidance system by Terradox. The boom is divided into 6 sections that come on automatically. Ernie sprays at higher pressures with XR nozzles that allow his rate controller to keep applications uniform. With the shielded booms running at 6 to 8 inches off the ground, Ernie is not concerned about herbicide drift at all.

Ernie says their direct seed weed control program focuses on a liter of glyphosate or glyphosate and Express in the spring and glyphosate post harvest. They do some preharvest as well. One of the problem weeds they have to contend with is foxtail barley. Ernie has been pretty happy with the control they get with a liter of glyphosate applied in the spring. Another problem he mentioned is Scentsless Chamomile on one piece of land. A previous tenant had land polluted with Scentsless Chamomile that spread on his equipment when he was farming this field. Short of washing down the outside and blowing out the inside of harvesting equipment, Ernie says there is no way to keep from spreading this weed. He is happy that they have been able to keep it from getting established on the rest of their farm with their use of glyphosate. In the wet years, it comes back with a vengeance on this particular field and there are always a few plants in the sloughs to keep up the seed bank. They are also concerned about Group 2 resistant Kochia so use as few group 2 herbicides as possible.

The Halls are seed growers. Ernie says that works with direct seeding because of their crop rotation. The rotation they like to follow is flax, canola, seed wheat, peas, wheat. At one time, they grew oats or barley in place of the second wheat crop but were not happy with yields and returns from these other cereals.

We look forward to Ernie's contribution to our board in the coming years. ●



Malt Barley Management

By **Tim Nerbas, PAg**
NW Conservation Agrologist

My illustrious colleagues (Mayerle, Oliver, Polegi, Szwydny, and McClinton) and I recently compiled information regarding the fertility management of malt barley. These are the highlights from our project.

Malt barley production is very important for western Canada. Yet there is little research on the effects of agronomic practices on seed quality and uniformity. The result: only 20% of malt barley grown is selected for malting quality each year. One study in western Canada showed malt quality to be affected more by environmental and genetic factors than fertilizer practices (Therrien et al., 1994). Jackson (2000) found in Montana that grain yield, grain protein and kernel plumpness are all characteristics strongly related to yield potential and available N. By using soil tests, producers can predict yield response to the total N supply (Soil N + Fertilizer N) and thereby determine what target yield will maximize their returns while maintaining acceptable protein levels for malt barley selection. In Manitoba, Grant et al., 1991, found similar results to those found in Montana. Their findings showed that grain protein concentration is strongly related to the available soil moisture during the growing season.

A series of field experiments was conducted at four locations across Saskatchewan. The experiments included four levels of N, two levels each of P, K, and S, and six seeding rate levels. AC Metcalfe was the cultivar used at all locations. Plots were set up as a 3-replicate randomized complete block design at all sites except Biggar where 2-replicates were used. All plots were direct seeded using either a 15 foot Flexicoil air drill with single side band stealth openers or a 12 foot Conserva Pak plot drill.

* Base Seeding Rate: 84 lbs/ac

* Seeding Rate Trial:
24, 48, 72, 96, 120 lbs/ac

Fertility Treatments:				
N	P	K	S	
* 50	20	10	10	
0	20	10	10	
50	0	10	10	
50	20	0	10	
50	20	10	0	
30	20	10	10	
70	20	10	10	
0	0	0	0	

* Base Fertility Rate for seeding rate trial.

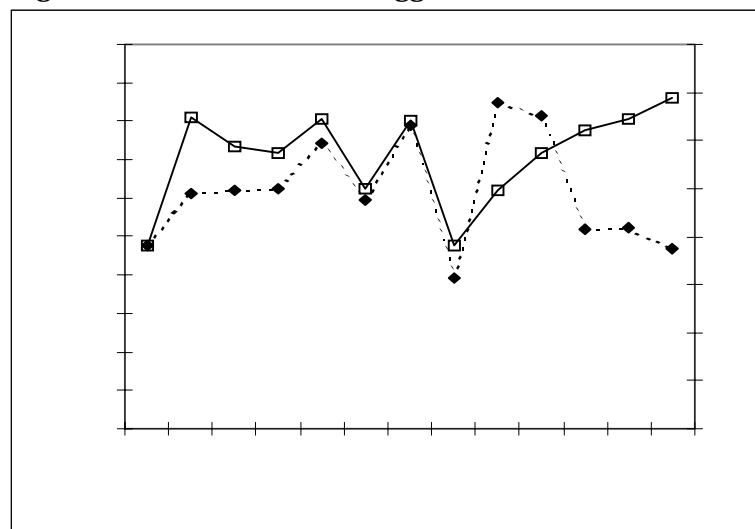
Results and Discussion

• Impact of N

* Zero N produced the overall lowest yields and lowest proteins

* Barley yields increased with increasing levels of applied N

Figure 1. Yield and Protein at Biggar - 2005



* 70 lbs of actual N resulted in the highest yields (4 of 4 sites) and highest protein levels (3 of 4 sites)

* Impact of P, K and S

* There was no effect of K and S at 3 of 4 sites. Only at the Biggar location was yield affected adversely by removing K and S (Fig. 1)

* Removal of P, K and S did not impact protein concentration at any location

* Seeding Rate

* Decreasing seeding rate decreased yield and resulted in higher protein levels, especially very low (24 lbs/ac) seeding rate levels

* As seeding rates were increased yields were impacted positively and grain protein levels declined

* Observations of increased weed growth were noted with very low seeding rates

* Presence of green seeds were noted in samples of very low seeding rates



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Acknowledgements

Canadian Wheat Board

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Agri-Environmental Group Plan (AEGP) Assisting Farmers near Langenburg

**By Juanita Polegi, PAg
Assistant Manager & SE Conservation
Agrologist**

The Agri-Environmental Group Plan (AEGP) in the Lower Assiniboine and Lake of the Prairie Sub-Watersheds is up and running with many farmers in the Langenburg area taking advantage of the planning process and subsequent available funds. Trevor Plews, DUC Head of Upland Restoration, and a member of the Steering Committee is pleased with the interest shown by the farmers in the area. "This is a very appealing program for farmers," he said. "Our goal was to have at least 50 plans submitted within the year and we will achieve that easily".

AEGPs are unique to Saskatchewan. An AEGP is similar to an Environmental Farm Plan (EFP) but is implemented on a multi-farm basis. The Plan targets a specific risk within a defined geographic area, such as a watershed, by focusing the efforts of producers to address a single agri-environmental issue. For instance, the landowners in the Yellowhead REDA area decided surface water quality is a significant issue and identified improving riparian area health and wintering sites for beef cows as two management practices which will address their concerns.

The process for developing an AEGP is simple. The proponent of the Plan, in this case the Yellowhead REDA, develops a proposal. It's submitted to the AEGP Sub-Committee to assess its merits. Once accepted, the work for the proponent begins. The Yellowhead REDA held public meetings in Wroxton and Langenburg. AEGP public meetings have a two-fold Purpose: 1) to educate the public about the need to be concerned about water quality and discuss the issues that impact the watershed such as livestock run-off,

livestock confinement, over grazing, pesticide drift and provide a list of solutions; and 2) to have the Public decide which of the issues most impacts the watershed. As mentioned, the Yellowhead REDA group decided that riparian areas needed better management and winter feeding sites needed to be addressed.

A report is then submitted to the AEGP Sub Committee for review and approval. Upon approval, the Subcommittee informs the proponent which BMP categories from the Canada – Saskatchewan Farm Stewardship Program will be available to producers through the Plan. The Yellowhead REDA is using BMPs 7 (Wintering Site Management) & 10 (Riparian Area Management).

The Yellowhead REDA has now hired a Technician who visits interested farmers and assists them with completing their individual plans as they pertain to the Group Plan. While not a requirement of the AEGP process, the REDA has followed the lead of some other proponents and has established both a Peer Review committee and a Steering Committee. Four producers sit on the Peer Review Committee. They review the individual plans and recommend to the REDA if they should be approved or not. The role of the Steering Committee, composed of reps from DUC, SWA and SAF, is to provide agronomic and technical advice to the Peer Review Committee. Once the REDA has been informed that a plan should be approved, it forwards the plan to the Environment Chapter Working Group. Upon approval from this Group, a Statement of Completion Certificate is issued to the farmer and he/she can then make application for funding from the Farm Stewardship Program for eligible costs as they relate to BMPs 7 & 10.

Several practices in these 2 BMP categories are eligible for funding. These include strategic fencing,

seeding of buffer strips, remote watering systems, establishing shelterbelts, improved stream crossings as well as others.



By the first of June, 24 producers had submitted applications for approval to the Peer Review Committee of the Yellowhead REDA. Roughly 4800 acres will be seeded to perennial cover to provide buffer strips around riparian areas. Buffer strips must be 30 m or 100 feet in width. Trevor Plews indicated that at least another couple of dozen plans are currently in the process of being completed. By the next deadline, indications are that applications will be forthcoming for approximately 33 miles of interior fence. Applications for the establishment of winter feeding sites will also be received.

While there are about 10 such AEGPs in the province, they are not designed to discourage the EFP process but rather to augment it. Plews sees the AEGP as a stepping stone to each farmer completing an EFP. Each farmer is allowed to apply for a maximum of \$30 K under the NFSP, whether it's applied for under the AEGP or the EFP.

The Yellowhead REDA's AEGP appears to be achieving success on two fronts. It's enabling farmers who may not have taken the time to complete an EFP to implement BMPs that will enhance the sustainability of their farms. And dozens of farmers are implementing approved practices that will protect and maintain the health of the watershed. This is truly a win-win situation for both the farmers and the watershed.

For more information on the Yellowhead REDA's AEGP, contact Trevor Plews (782-2108) or Michelle Andrews (743-5177). ●

SSCA Welcomes New Director

By Rich Szwydky, PAg
WC Conservation Agrologist

The Saskatchewan Soil Conservation Association welcomes Doyle Wiebe, a producer from the Langham area, to fill the west central regional director position. The SSCA would like to thank outgoing director Lyle Wright for his efforts and commitment to the board.

Doyle earned his Bachelor of Science in agricultural economics from the University of Saskatchewan in 1976. Doyle has taken on various roles in the ag industry. Some notable accomplishments include working with Settler Computer Technologies Inc. to computerize management records on the farm in the 1980's. Doyle also taught computer courses sponsored by SIAST and others to farmers. The experience gained through Settler and SIAST led Doyle into various consulting roles regarding farm business planning.

From 1988-2002 Doyle worked with Ceres Enterprises Inc., an ammonium sulfate distributor based in Saskatoon. As an initial partner in the business, he took on the role of financial officer and, in latter years, became general manager. From 1991-94 Doyle took a break from Ceres and traveled to Bangladesh with his family, where he worked with the Mennonite Central Committee managing a soybean development project.

Doyle and his wife Val took the final step in taking over Doyle's family farm in 1997 when his dad decided to retire. He states it took about 20 years to fully buy in and make the transition from junior partner to sole owner of the farm where he grew up. Doyle currently farms approximately 3,600 acres, and grows wheat, barley, canola and flax.

Doyle says the biggest challenge with farming in his operation is managing the land. He explains the majority of his land base has a crop

insurance rating of class L soil. Most of the land consists of a light textured, sandy soil that contains many potholes that collect water. The soil can be somewhat production limiting, and tends to erode in drier years.

In the mid to late 1970's, the Wiebe farm began to evolve. Doyle says this was the result of suggestions made by two prominent researchers from the University of Saskatch-



Doyle Wiebe

ewan. Both Don Rennie and Les Henry gave Doyle suggestions regarding water management in dry land farming. Doyle adopted some of their principles and continues to use them today.

Because of the sandier soils, Doyle states moisture is always the limiting factor. Don Rennie's comments on moisture conservation made Doyle think about the changes he could make in the operation that would help conserve extra moisture. The first change Doyle made was to place stubble deflectors on his swather. This practice helped capture extra snow and resulted in improved soil moisture conditions, especially at spring seeding. In 1985 Doyle and his dad purchased their first straight cut header. This allowed them to leave taller stubble, which resulted in the capture of extra moisture.

Another change on the Wiebe farm was the adoption of continuous cropping, based on comments made by Les Henry. Because Doyle's land base consists of slightly rolling topography, water would always accumulate in the lower areas. When salinity started to creep in, Doyle began to lose productive acres. Les Henry explained continuous cropping would help reduce the water table and reclaim some low spot areas. To date, Doyle says salinity is no longer a significant issue.

Doyle currently fertilizes and seeds using two low disturbance passes. He applies anhydrous ammonia in the fall, using a 3/4" low disturbance knife set on a 12" row spacing. For his seeding operation, he retrofitted a 41-foot Morris 8900 air seeder with a McKay knock on knife, and 2" Dutch shank mounted packers. Doyle says due to the abrasive nature of his soil, carbide tips are necessary to extend the life of his openers. With his current set of openers, Doyle estimates he has seeded 10,000 acres.

Doyle currently harvests with a John Deere 9650 combine, along with a 36 foot Honeybee straight cut header. He says the tool he uses the most on the combine is the yield monitor. This allows him to determine the production off of each field, and make instantaneous production management decisions for each quarter.

Doyle has always believed in the principles of the SSCA. In 2003 he became an SSCA member and attended his first conference in 2004. Doyle believes the carbon we sequester into the soils is a valuable resource, and hopes to help producers recognize its importance. He welcomes this challenge and others associated with serving as regional director. ●



PERENNIAL SOW THISTLE CONTROL ... CONTINUED FROM PAGE 4

Finally, pre-harvest control for perennial sow-thistle is good but the general effectiveness is less than Canada thistle. Brenzil states that Canada thistle is more dedicated to the perennial lifecycle than perennial sow-thistle plants. Once Canada thistle plants sense the daylight changes, the plants will rapidly shift the nutrient flow from production of top growth to downward into the roots in order to store energy for winter. Brenzil believes that the perennial sow-thistle plants are more flexible in their movement of sugars in the plant and are less dedicated to the strict daylight responses found in Canada thistle. He believes this, combined with the majority of productive leaves in perennial sow-thistle positioned lower in the crop canopy, could be the reason why producers sometimes see better pre-harvest results on Canada thistle than on perennial sow-thistle.

Creeping rooted perennials are always the most difficult to manage and control. No single herbicide application or other control procedure will consist-

ently eliminate or provide long term control of perennial sow-thistle. Effective control requires a multi year integrated control plan that uses a combination of control measures in all periods of application. The goal of this multi year control would be to eventually deplete the root system of nutrient reserves, prevent seed production and dispersal and lower perennial sow-thistle pressures.

The best control strategy would include practicing proper fertility to improve crop competition, keeping proper crop rotations, using registered post-emergent herbicides, and to include pre- and post-harvest glyphosate applications.

Spring applications of glyphosate can certainly control new seedling perennial sow-thistle plants. Spring applications of herbicides are less effective since little herbicide is translocated to underground root buds. Pre-harvest glyphosate applications will probably provide the most effective control of established plants,

because at the stage of the pre-harvest application, the net movement of nutrients is downward into the roots. Glyphosate applied at this time will be moved down into the roots and rhizomes, thereby killing the whole plant, including the underground buds that produce next season 's plants.

Producers should be cautioned about waiting for a post-harvest opportunity to apply glyphosate to control perennial sow-thistle. Once perennial sow thistle is cut during the harvest operation, its regrowth in the fall is limited. Should re-growth occur, producers would have a shorter window of opportunity because of cooler temperatures and frosts.

Using an integrated management approach, including a combination of control options, will usually provide producers the best results in their attempts to control perennial sow-thistle. The most economical and effective tools, however, will always be prevention and awareness. ●

PLAN SPRING MANAGEMENT OF CHEM FALLOW IN THE FALL ... CONTINUED FROM PAGE 1

the stubble is short, but the straw residue on the ground is long and poorly spread, it will also cause plugging problems. In addition, under wet conditions, the plugging potential is dramatically increased, even with drills with 12 inch row spacing.

There are some techniques that can help to seed through such conditions. Ideally, wait until the surface is dry and the day is hot. It will be easier for seeding tools with C-shanks to pass through this residue. Unfortunately, conditions in the spring are often such that this is not an option. Slowing down when seeding chem fallow will generally help. This means slowing down from your normal 5 mph to likely around 3 mph. I know this will be frustrating but more speed tends to only increase the frequency of plugging. Seeding on an angle can also reduce plugging to a certain extent. One technique I have used that tends to reduce the incidence of plugging is to steer the tractor left and right in a slight swerving action. This causes the drill to swing back and

forth slightly and in many cases it allows the residue to roll off the C-shank. It won't stop all the plugging but it can help in the heavier spots. Heavy harrowing tall chem fallow is generally not very effective. It may help break up some of the straw lying on the ground, but any gains you might get from that will likely be offset by knocking down most of the standing stubble leaving even more straw on the ground and that will only aggravate the situation.

The best method of getting through chem fallow begins at harvest. Residue management is one of the pillars of direct seeding and it is doubly important in chem fallow. Cutting the stubble shorter than you would normally will help considerably. This will mean cutting it no taller than the width of your row spacing, perhaps even a bit shorter. Remember, the stubble will mostly be breaking off at the soil surface so long stubble can cause a lot of problems when trying to seed the chem fallow. Spreading the straw out of the combine is important,

but with a heavy crop, a straw chopper is more appropriate, especially when the straw is a bit tough. A lot of straw laying flat on the ground will simply make your air drill into an expensive rake, especially when the stubble is breaking off as well. Cutting the stubble shorter at harvest and using a straw chopper will go a long way towards reducing the problems at seeding time.

Planning ahead for chem fallow is really the key in getting through it in the spring and especially during wet or damp conditions. There are some techniques to help a C-shank drill get through tall chem fallow if you are stuck with that situation, but even these may not be enough to get through in wet conditions. If you have access to renting or getting it custom seeded with a direct seeding disc drill or perhaps a double knife type drill, you will experience much more success. Ultimately though, good planning and careful attention to residue management is the key for success in seeding through chem fallow in wet conditions. ●

Conservation Learning Centre in Transition Period

By Mitchell Japp, PAg
Riparian Project Co-ordinator

The Board of Directors and staff have been adjusting to the changes made at the Conservation Learning Centre (CLC). As a staff and Board, we are looking for a new direction for the CLC. In order to find where we best fit, we need to step back and have a look at what we've accomplished so far.

Since 1993, the CLC has offered effective learning experiences for adults and youth. Through 40 demonstrations and projects and 25 extension activities each year, it has impacted countless producers, industry representatives, researchers and extension personnel. The school program has taught close to 16,000 students the role that producers play in conserving soil, water and wildlife resources while producing an ample source of quality, safe food.

The success of these programs is attributable to the strong and committed support we have had from our members, partners, sponsors, contributors, supporters and neighbours. This has been augmented with successful applications for project funding from varied sources. For all the past support we have received, we are grateful.

Over the past year, the Board of Directors has been facing many challenges. In the last Prairie Steward, we showed the losses we incurred in the 2005 crop year. Over the last three years, poor crop quality and/or yield, and low commodity prices have resulted in \$60,000 less income than expected. This, combined with diminished funding opportunities, has forced the re-evaluation of programs and staffing.

Difficult decisions have been made. As a result, we will be renting out most of our cultivated acres and we are reducing partici-

pation in off-farm extension programs and we must carefully evaluate how we spend our time on current projects. Unfortunately, one of the necessary staff cuts was to lay off the manager, with the position to remain vacant until funding can be found. In the interim, a Management Committee will be put into place to handle major management issues and



Mitchell Japp

responsibilities. Under her management, Laurie Hayes led the CLC to new heights and will be missed at the CLC. Fortunately for her, she has already secured a job with the Saskatchewan Canola Development Commission.

On the positive side, our highly successful school program will proceed as in the past. We will continue to fulfill our commitment to stakeholders and ongoing projects. Tours of projects and demonstrations will continue, including a forage field day in late June and our general field day August 1. Mitchell Japp remains as Riparian Project Coordinator. The demonstration sites for this project are established with field days planned for late June and into July. Other projects on site include a novel crops demonstration funded by Agri-ARM. Several unusual (at least for Prince Albert!) crops have

been planted and already emerged. Some of these include: niger, oilseed radish, switch grass, faba bean, pinto bean, and caraway. The Saskatchewan Forest Centre has another research site to evaluate the effectiveness of a chemical called GOAL 2XL for controlling weed growth around hybrid poplars.

Currently, the school program is nearly finished for the spring. Kyla Lewis and Kirsten Gaudet are leading tours for the kids when they come to the farm. They have been receiving excellent feedback. Having two high quality presenters like Kirsten and Kyla can only mean good things for our school program and the students the program serves.

In addition, Doris Beeds has been hired to handle the financial reporting and some minor administrative duties.

In the future, we need to find a niche that we fit into where we can continue our success as an organization. Our school program is our pride and joy at the CLC and I believe that education is something we do well. I think our future will take us down a path where the education component at the CLC grows larger than ever before.

Although our path ahead is not paved in gold, we are confident we will work our way through this transition period and be a stronger organization for it. Although the adjustments are major, we will continue to work together with our members, contributors, supporters, sponsors, partners, neighbours and funders to maintain our strong history as a facility that educates adults and youth through field-scale demonstrations and hands-on activities.

Contact us at 953-2796 for further information on field days, programs or general questions! ●

MALT BARLEY MANAGEMENT.... CONTINUED FROM PAGE 7

Figure 2. Yield and Protein at Tisdale -2005

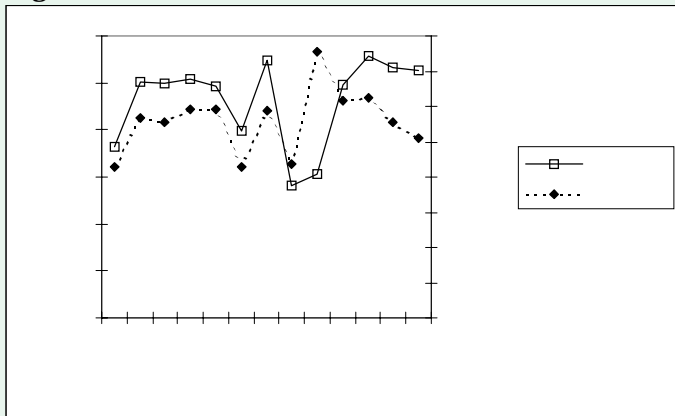
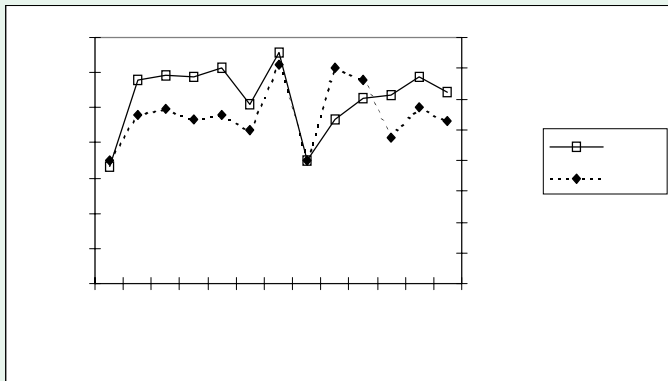
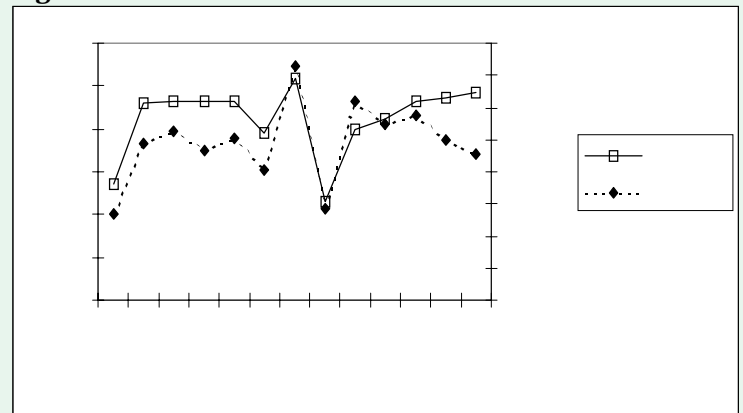


Figure 3. Yield and Protein at Swift



Cooperators

- John Bennett
 - Raymond Lacoursiere
 - Wayne Gronvold
 - Wagon Wheel Seed Corp
- Esso - Swift Current
Twin Valley Co-op, Bredenburg
Greenhouse Gas Mitigation Program
Multi Crop Services Ltd.
Prairie Malt
Secan
Soil Tech •

New GHG Fact Sheets Available

5 new Fact Sheets and Producer Profiles, prepared by the SSCA staff, are now available. The articles deal with a wide range of subjects relating to greenhouse gas mitigation.

One fact sheet discusses the value of straw. Another fact sheet reviews the issues around single shooting and double shooting fertilizer. Growing your own Nitrogen is the focus of another fact sheet. Utilizing cattle manure in a direct seeding operation is examined in a Producer Profile. In another Producer Profile, a producer shares his thoughts on the benefits to livestock and cattle from winter grazing.

To date, the Staff have written a total of 20 Fact Sheets and Producer Profiles. To view these, go to www.scca.ca and click on the link *Direct Seeding Agronomics*. •

<http://www.scca.ca>

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