**Prairie Steward...Conserving the Land Resource**

The Newsletter of the Saskatchewan Soil Conservation Association Inc.

**Summer Issue No. 7, 1992**

**SASKATCHEWAN SOIL CONSERVATION ASSOCIATION**

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**Election of SSCA Board of Directors for 1993 - 1996**

Is the conservation of Saskatchewan's soil important to you and your family? If so, here is an opportunity to lead and direct the conservation efforts of the Saskatchewan Soil Conservation Association (SSCA).

**SSCA Board Member Responsibilities**

The Saskatchewan Soil Conservation Association Inc., a non-profit, charitable corporation directed by a Board of nine Directors elected by the members of the Association, has established a mandate to ensure that the SSCA is managed to encourage soil conservation within Saskatchewan, to meet the needs of the membership and to enhance the viability of the Association.

**Myths, Truths & Outright Lies About Soil Conservation**

By: Bob Lennard
SSCA S.E. Regional Soil Conservationist

Read the following statements. Decide for yourself if they are true or false, or if you really don't know, but think you have heard them before:

1. Soil conservation only works in the dry years.
2. We need to stop spraying to conserve soil.
3. Fertilizing fields has no effect on the soil.
4. Fallowing fields has no effect on the soil.
5. The “North” doesn’t have to worry about soil conservation!
6. All farmers destroy wildlife habitat!

* Answers on page 10.
We’re also continuing our year-round efforts to conserve and improve soil for our future years. The soil conservation Tip of the Week produces this federal provincial agreement on soil conservation is a handy guide for all. It’s filled with suggestions as to what we all should be doing throughout the summer and fall months to conserve soil.

Speaking of seeding and soil conservation, please keep June 18th, 1993. Make plans to attend the Soil Conservation Field Day and Direct Seeding Demonstration at the Moose Jaw airport. I’ll have more details in the next Prairie Steward.

Over the summer months, many of the districts will be holding field demonstrations to demonstrate direct seeding and other conservation ideas. I encourage you to attend these field days and see how these methods would fit into your farming operation. Your best bet is to get in touch with your regional soil conservationist to find out what is going on in your area. Their names and phone numbers are listed on the bottom of this page.

SOS Program

The Save Our Soils program has certainly been a success over the last three years. Unfortunately the funding for the program runs out at the end of March, 1993. The SOS program has attracted top notch staff and they’ll be missed, if the SOS program is discontinued.

The SCSA is working on a proposal to ensure that some of the soil conservation programs remain viable. The programs may change slightly or be handled in a different manner. We are looking to the Green Plan for funding. However, it is too early to tell what will happen with this proposal. We urge all good farmers to see that the shelterbelt program will continue as it has in the past. To add support to this worthwhile program, the SCSA has recently hired a Shelterbelt Information Officer. Chris Bueckert will be a valuable asset to our organization and anyone else interested!

President's Message

Dave Bueckert

We are pleased to announce that Ray Ketterson has joined SCSA's Regina staff as the Communications Specialist. Before joining the SCSA, Ray was involved with the production of videos and weekly agriculture television programs at Ag-Com Productions. He is actively involved in a farming operation near Rockeyl, Alberta, where he replaced Grant Carter on May 10th. He has moved over to the PFFA. We wish him all the best in his new job.

We are pleased to announce that Chris Zahab has joined SCSA's Regina staff as the Shelterbelt Information Officer as of June 1st. Chris is originally from S都想, Sk. and is a recent graduate of the University of Saskatchewan. Chris previously worked on shelterbelts and the effect of birds and bats on them for a leading chemical company. Chris replaces Howard Fox, who returned to the PFFA.

Nancy Fraser, the SCSA’s Range and Forage Specialist, will be leaving us at the end of June. Nancy and family are moving to Victoria, B.C. Nancy’s expertise in this field and as one of our original SCSA employees will be missed. Good luck and best wishes!

Annual Meeting

The 1993 SCSA Annual Meeting and conference promises to be another winners. "Direct Seeding: Making it work in the dirtier soils?" is the theme of this year’s conference. It will be held in Moose Jaw, early in February, 1993. The cost of registration will be kept to a minimum, so you will hope to participate in this year’s conference and annual meeting. The attendance of the last year’s conference was fantastic!

Elections

Nominations are required for directors in the following regions. North East, West Central, South East, and for President-Elect. The nomination deadline is September 30th, 1992. Please use this opportunity to express your rights and responsibilities as a member of the SCSA. Your involvement makes the SCSA a stronger organization which will benefit all members.

I hope to see many of you at various meetings and conferences over the summer months. Please come out and be a part of the action, if you don’t recognize you. It’s important that SCSA members get to know each other. Have a safe and happy summer!

Bumper Crop for SCSA Regional Staff

SCSA Regional staff in the Central Regions brought spring in on a fine foot. Congratulations and best wishes to Juanita and Allan Folge (East Central) on the birth of a son, Murray, on May 17th. Congratulations to Brian and Mountain, of Yonkers, is looking after the East Central region for Juanita while she is on maternity leave. Best wishes are also extended to the Struthers family on the addition of a daughter to their family, which they named Adrienne.

Congratulations are also extended to Garth and Carol Ann Patterson (West Central) on the birth of a son, Luke, on April 23rd. In related news, the SCSA’s Conservation Education, Youth Cove, is nearing completion on a special individual education soil conservation kit for the new members of the SCSA.

Membership Incentive

If you’ve been considering a membership in the SCSA, now is the time to join! Take advantage of the Monsanto membership incentive. Over 300 farmers have already taken part and that means there’s less than 300 spots left. Don’t delay, call today! See page 12 for more information.

Video Update

The popularity of the SCSA’s video series is growing. To date over 1000 copies of video I and 1100 copies of video II have been distributed. Your membership brings you to a free set of videos. See page 12 for more information.
What are the advantages? Potential benefits include:

- Reduction in the volume of herbicide needed per acre, and
- Reduced soil compaction in herbicide treated areas.

- Time savings due to fewer tills and hilling.
- Easier spraying units that can reduce soil compaction.
- Less no-till spraying, thereby reducing potential environmental risks.

What are Johnson’s impressions? “Beyond original expectations” Johnson went to Australia to see and operate a DetetSpray last December. Johnson’s sprayer is a newer version called Generation 4, which he believes provides better and faster detection. He’s seen the technology detect wild oat plants at the one leaf stage, and the detection rate stays high depend on that 100% of the time.

On his own farm, Johnson used the equipment under a field application of Roundup at the 1/3 lb./acre rate. It cost him $22/acre for the herbicide. That has since improved to around $20/acre and he expects to be able to accomplish by using the equipment over an extended season including:

- Pre-seeding application
- Crop spraying (continuous spray rate)
- In 1st and 2nd year on chem fallow
- Desertion of hilling and pines.
- In summer fallow.

Soil Moisture

- See comments on Page 2.

Adaptability

- In many areas of Saskatchewan, cropping choices are limited by the local climate. Only crops that can be grown without being damaged by one of the following conditions are adapted to the driest brown and dark brown soil zones. These soil zones are well suited to growing drought tolerant crops such as wheat, barley, lentils and sunflowers.

In the cool, moist conditions of the black and grey soil zones, crops such as sugar beets, peas, barley, wheat, and potatoes are well adapted. Local features such as the topography within the farm will determine which soil type are also factors in the adaptability of crops.

Timeliness

By planting crops that mature at different times, seeding and harvesting can be spread out over several weeks. This type of rotation can also help reduce the amount of herbicides needed in a direct seeding system.

Iron Control

- Disease control is the most common reason for rotating crops. Rotations are effective because most disease organisms can only infect a few crops. For example, leaf diseases (Dehiscence, Anthracnose, and Rust) are spread by the organisms from the host plant to the next host plant. By eliminating the organisms’ food supply, which prevents them from reproducing.

Generalists who can remain viable in the soil for several years, crops can be used to space several years apart to get effective control. For example, Annual Ryegrass can be spaced at least four years apart to control blackleg and sclerotinia. Wheat should be spaced two to three years apart to minimize leaf and stem diseases.

Insects

- As part of an integrated pest management (IPM) strategy, growing a wide variety of crops can help minimize the potential for pest occurrence. For example, a mixture of calcium and insecticidal soap can limit the occurrence of aphids and other insects. Crop rotations can also limit the food supply for certain pests.

Planning Crop Rotations

- By: Blake McClintock
- SCS N.W. Regional Soil Conservationist

Planning a proper crop rotation is essential to successful direct seeding. The basic theory behind a rotation plan is that a crop can be grown that is compatible with the existing soil fertility, or the crop can be grown more efficiently with the use of a specific crop. Crop rotations can help to maintain and improve soil fertility and structure, reduce diseases and pests, improve soil moisture, and help reduce erosion.

Crop Control

- Weeds can be a problem in direct seeding rotations. Early rotation planning can control weeds by using crop rotation and plant growth practices. Some fields may need a control plan to specific crops in order to keep weeds from becoming a problem.

- One common practice for direct seeding is to alternate broadleaf crops with cereals. This rotation allows for the use of highly effective grassy weed herbicides in the broadleaf crop while traditional weeds can be managed with herbicides.

- In order to make the most of the DetetSpray technology, Johnson has also adapted some specific crop and chemical treatments that are available for various crops.

- A Fleec Coil in a three wheel, narrow spaced, variable rate, Matrix Spreader-Puller

- If this technology works as well as we have heard, soil conservation efforts can only benefit. You will want to keep your eye open for local field demonstrations to “check it out”.

Heavy Clay Soils Under Great Peril

By: Don Sulferther, P.Ag.

DetetSpray’s new major market is Saskatchewan. Our clients will have taken on the challenge of establishing a production system that will provide a sustainable yields. These challenges are critical as we continue to work with the government to improve the sustainability of our products.

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**Central Roundup**

**Holistic Resource Management Workshop A Success**

By: Nancy Fraser

The registration list was full and we were turned away from the Holistic Resource Management (HRM) workshop held at the end of February in Regina. The SSCA and the Grazing and Pasture Technology Program, as presenters of the workshop, were very pleased with the interest.

Participants in the HRM workshop were exposed to a thought model designed to help people make clear and consistent resource management decisions. HRM teaches people to prioritize the needs of land, water, and wildlife, and to respect and value all components of the system, rather than focusing on the “quick fix” band-aid to symptoms.

Farm families, ranchers, environmentalists, wildlife managers and extension workers finished the three-day workshop with an appreciation for the concept of holistic management and left ready to apply their new knowledge to everyday farm situations. All on the workshop evaluation forms, all participants rated HRM as very worthwhile. Even the participants left it was time well spent.

If you are interested in HRM or wish to talk to someone who took the workshop, please contact our Regina office and we will be pleased to supply you with a list of participants.

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**How Fuel Prices Affect the Cost of Spraying and Cultivating Operations**

By: James Lochken

**Cost Of Farm Fuel**

From 1981 to 1990, fuel and lubricant purchases were the second largest Saskatchewan farm cash expense every year after interest payments, according to Statistics Canada. In 1991, fuel and lubricants together were the largest cash expense.

Farm fuel and other petroleum product prices rose steadily through the early 1990s. More recently, they have fluctuated below their 1995 peak. In 1998, farm operators faced uncertainty in both fuel price and fuel taxation.

Cost Of Spraying Versus Cultivating

Figures 1 and 2 show that increasing the price of fuel increases the costs of a cultivating operation much more than the costs of a spraying operation.²

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**Project Soils**

By: Yvette Crane

**SSCA Soil Conservation Educator**

An extremely hard-working group of ten educators and six conservation specialists met at the Manitou Inn, near Bentley, near the south end of Saskatchewan the first weekend of May. Their goal was to develop hands-on soil conservation activities for children in rural and urban classrooms.

The writing workshop was a great success. It resulted in 15 activities for Project Soils, which we hope to formally pilot in Saskatchewan schools next fall.

The activities are based on the Project Wild model. Project Wild is an educational program which is an approved resource for Saskatchewan schools. Spraying the development of “Project Soils” is an exciting new area in the venture of conservation education for the SSCA. The Project Soils activity manual will provide a brand new educational resource, specific to Saskatchewan, on a model which is already proven and accepted throughout the province.

The SSCA, in cooperation with Saskatchewan’s Department of Natural Resources, will now be able to give educational workshops on soil conservation using the manual. A new activity manual will better equip educators and others working with young people to teach soil conservation.

We are very excited about this, our latest educational project. If you are interested in seeing a draft copy of the activities, the activities manual was given to us at (306) 787-0555.

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**How Fuel Prices Affect the Cost of Spraying and Cultivating Operations**

...continued from page 3

Spraying operations can replace cultivating operations at various times. In the fall, equipment that is left standing to protect the soil and trap snow. Winter annuals can be economically controlled with an application of 2.6-2.8 in the fall or early spring (before the end of April).

Herbicides will also give good preceding control of other weeds, eliminating the need for preceding cultivation. Herbicides can replace cultivation on fallow land throughout the year.

Conclusions

Farmers can reduce their fuel cost by choosing spraying over cultivating. At current fuel prices, the total costs of24.0-2.8 are quite similar to the total costs of cultivation. Fall or early spring 24.0-2.8 is an economical alternative to cultivation.

Factors other than the costs of spraying and cultivating operations must be considered. These include the effectiveness of spraying for cultivating for controlling various weeds, the cost of various herbicides, the value of soil fertility, the value of labor and time, and the value of preserving crop residues and not disturbing the soil.

As fuel prices rise, the relative fuel requirements of various machine operations will increase in importance in determining how field operations are carried out.

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**New Poplar Tree Is Available**

Manitou is a new poplar clone that has been developed at the PFRA Shelterbelt Centre in Indian Head, for use in farmed shelterbelts. It is a relative of the Walker poplar, a clone released earlier from the Centre.

Because of the Manitou poplar’s male clone, it will not produce any seed cotton. In 1998, the Manitoba Ministry of Agriculture and Food, the tree was treated with herbicides to ensure that about 25% of its land with a wild oat resistant poplar. This usage is significant in the tree’s role as a source of clean energy.

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**Report Card on Soil Conservation**

By: Bob Linnell

SSCA S.E. Regional Soil Conservationist

This report card will address the question “How well are we doing in our studies of the subject of soil conservation?” The answer related to us through a number of important factors.

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**Modified Sprayer Saves Dollars**

By: Garth Patterson

**SSCA W.C. Regional Soil Conservationist**

Tank mining products is a great way to get more work done with less equipment, according to the farmer. What happens when farmers choose to purchase wild oats, but you still need to spray the brown fields? Ever feel like you’re wasting product and money? Well, you were.

Bill Boyd, an Eston area farmer, decided to do something about it. “I’d heard that vegetable growers used sprayers with two booms, so I decided to adapt my sprayer to two booms and two tanks.”

Boyd started with an eighty foot Wildger sprayer with a 400 gallon tank at the front, and a 200 gallon tank at the rear. He used the frames to accommodate a 200 gallon tank in front of the original tank. The 400 gallon tank was fitted about four inches away from the first tank. The sprayer now has two hydraulically driven pumps which can be individually controlled by electric solenoids. The sprayer is as simple to use as the original Wildger.

Boyd’s durum fields are entirely sprayer. He uses the 200 gallon tank at the rear to spray weeds in the dormancy season. The sprayer is modified cost about $1800, field. Parts for the entire modified sprayer cost about $1800, according to the inventor.

Boyd’s durum fields are entirely spraying operations based on an 80-90 foot PTO sprayer (70 annual hours of use) pulled by a 2 wheel drive tractor (80-90 annual hours of use at a rate of 500 to 600 hours per year). This was the second major activity of the farmer. Farmers can reduce their fuel expense by choosing spraying over cultivating. At current fuel prices, the total costs of 24.0-2.8 are quite similar to the total costs of cultivation. Fall or early spring 24.0-2.8 is an economical alternative to cultivation.

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**Superintendent**

Orderly conduct will ensure you a finished reports as soon as possible.

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**Future planning is an area which is seemingly being dealt with in class. Everyone is reminded to diligently do their homework and be prepared to answer questions. Please prepare for the finished reports as soon as possible. Orderly conduct will ensure you a finished reports as soon as possible.**
If you’d watched your land blow for 25 years, would you still have the same attitude towards soil conservation if you were renting zero till drills and/or fertilizer a producer doesn’t purchase?

What is the problem? Why do the current efforts directed towards soil conservation seem to be failing? One possible reason is that the perception among a majority of producers and even some governmental officials is that soil conservation has few, tangible benefits. This is not surprising, given that most of the benefits of soil conservation are realized long-term benefits to the landowner, and these results generally do not occur. This limits the yield and economic benefit from growing crops such as herbicides and fertilizers. To properly manage the soil for maximum water use efficiency, one must apply the techniques that have been developed for producing high-yielding crops. To crop successfully, farmers must make efficient use of available soil moisture and precipitation. Unfortunately, traditional farming practices such as conventional tillage may reduce moisture use efficiency by allowing evaporation and runoff losses to occur. This limits the yield and economic benefit from growing crops such as herbicides and fertilizers. One way to continue to improve crop efficiency and increase our reliance on cropping systems such as herbicides and fertilizers.

Direct seeding crop.

In this discussion, I have attempted to give a brief overview of some of the current environmental concerns, as well as some of the current environmental laws and regulations that I have encountered in my work. I will try to answer any questions you may have on the topics I have discussed. As always, a lawyer is the best person to consult when you have legal questions.
Hello everybody!
Thanks to all of you who entered the Soil Smart colouring contest last issue.
This time we have a “Soil Scramble” for you to try, some soil conservation limericks, and our colouring contest winners!

Here are all the names of the young conservationists who entered last issue’s colouring contest:

- Carol Van Raalte, Shaunavon 9 – 11 years
- Terri Gordon, Eastend 6 – 8 years

Here are some proud semi-finalists from SOS District #4 displaying their good work.

- Davey, Larisa Barber, Carissa Buye, Mything, all the other “semi-finalists” from SOS District #4, Jen Lachambre, Dana Matt, Logan & Jill Delee Dumonceaux, Brenna Grant, Ron Wurz, Debby Walter, Edwin Walter, Clint Jensen, Chantelle Bennett, Ryan Mything, all the other “semi-finalists” from SOS District #4

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Try and write your own limericks! Send them in to Soil Smart, and we will publish them in a future issue.

And the winners are . . .
5 and under: no winners
6 - 8 years: Terri Gordon, Eastend
9 - 11 years: Carla Van Raalte, Shaunavon
12 and over: Delee Dumonceaux, Val Marie

- Carla Van Raalte, Shaunavon
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