

Prairie Seeds

Saskatchewan Forage Seed Development Commission

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Welcome to the first Saskatchewan Forage Seed Development Commission Newsletter "Prairie Seeds".

We hope to have two newsletters per year with articles that pertain to what is happening in the industry. Articles will

Welcome

include research funded by the Commission and other industry interest stories. If you want to find something that interests you let us know. Also, to reduce the cost of sending out these newsletters in the future we will require your email address. Please

Forward your Email address or ideas for newsletter articles to sfsdc@sasktel.net

I am Nancy Gray the Executive Director of the Saskatchewan Forage Seed Development commission and if you have questions or concerns please email myself at sfsdc@sasktel.net or phone (306) 946-8107.

2007 Herbicide Screening in Red Clover and Perennial Ryegrass

-Eric Johnson and Dan Ulrich, Scott Research Farm. -Robert Blackshaw and Lyle Boswell, Lethbridge Research Centre

Established Red Clover

Three trials were conducted in the Arborfield-Carrot River area of Saskatchewan; however, seed yields were obtained at the two Arborfield sites only.

Odyssey, Solo, Pardner, Pardner + Solo, Basagran + Solo, and Select were applied to established red clover at the recommended rate (1X) and twice the recommended rate (2X). An untreated check and two herbicides, Basagran and MCPA Amine (registered) applied at the 1X rate were used for comparisons.

None of the treatments reduced seed yield when compared to the untreated check or MCPA Amine check. The 2X rate of Odyssey, the 1X rate of Solo, both rates of Pardner + Solo, and the 2X rate of Select were lower yielding than the Basagran check at one site. The lower yield with the 2X rate of Select was probably due to a lack of broadleaf weed control and is not likely a result of crop injury.

Seedling Red Clover

One seedling red clover trial was initiated at Nipawin, SK. Visual ratings

of crop tolerance were obtained in 2007 and seed yield data will be taken in 2008.

Solo, Pardner, Pardner + Solo, Basagran + Solo, and Select were applied to seedling red clover at the 1X and 2X rate.

An untreated check and two registered herbicides, Basagran and MCPA Amine applied at the 1X rate were used for comparisons.

The 2X rate of Pardner +

Solo resulted in just acceptable injury at the first rating; however, the

crop recovered by the second rating. Excellent weed control was obtained using the 2X rate of Pardner + Solo and both rates of Basagran + Solo.



Red Clover—Trifolium pratense by Maxi Millipede www.flickr.com

Seedling Perennial Ryegrass

Two trials were initiated in 2007 – one at Lethbridge, AB and one

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2007 Herbicide Screening in Red Clover and Perennial Ryegrass *(Continued from page 1)*

at Scott, SK. Visual ratings of crop tolerance were obtained in 2007 and seed yield data will be taken in 2008.

Prepass, Express, Frontline, Spectrum, Prestige, and Curtail M at the 1X and 2X rate were compared to an untreated check and one herbicide



Perennial Ryegrass by Maxi Millipede
www.flickr.com

check, MCPA Amine at Lethbridge. Buctril M, Pyra-sulfotole, Frontline, Spectrum, Prestige, and Simplicity at the 1X and 2X rate were compared to an untreated check and one herbicide check, MCPA Amine at Scott.

All of the first ratings indicated no injury. Some injury

was noted with the 2X rate of Spectrum and Simplicity at the second rating. At the 3rd and 4th ratings, Simplicity ratings were just acceptable.

***Please note that the use of un-registered herbicides is illegal and entirely at the risk of the producer.**

Timothy Seed Production

Clayton Myhre, Pickseed Canada (306) 862-8398

Timothy is a perennial bunchgrass with a shallow, fibrous root system. The plant is winter hardy and does very well on waterlogged and peat soils, but also grows well on clay, silty or sandy soils, where moisture is adequate. In Saskatchewan, timothy is best adapted to the Black and Gray Wooded soil zones and irrigated areas.

Timothy seed production in Canada occurs mainly in Manitoba, northeast Saskatchewan, and northern Alberta. Seed production in Saskatchewan has been occurring for more than 50 years and consequently there are a number of seed companies who purchase and process timothy seed. Timothy typically yields 300-400 lbs/acre of seed with yields reaching 700 lbs/acre or more per year. A timothy stand will produce seed for 5 years if moisture and fertility levels are adequate. The aver-

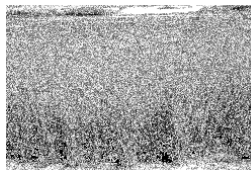
age price of timothy seed to the grower is approximately \$0.50/lb (\$0.40-0.70/lb) for Certified and \$0.30/lb (\$0.15-0.45/lb) for Common seed.

Timothy seedlings are vigorous which makes stand establishment relatively quick and easy. The preferred establishment method is to seed timothy without a companion crop as late as mid August; however, many producers will seed timothy in the spring with a cereal if soil moisture is adequate. A well established timothy stand is competitive which can reduce the need for weed control during the seed production years.

Harvest of timothy seed begins in early-mid August when the crop is ready to swath and is combined five to fourteen days later depending on the weather conditions. Producers find

timothy seed easy to harvest and they like the fact that trucking and storage is minimal. The bushel weight of timothy is 44-48 lbs/bushel so even an above average seed crop (600 lbs/acre) yields only 13 bushels/acre.

Once the crop is harvested the straw is baled and removed shortly after combining. The protein content of timothy straw is slightly higher than cereal straw (4.9% versus 4.0-4.6% for cereal straw) and is used for feed when supplemented with higher quality roughage. Fertility levels are maintained in timothy stands by broadcasting fertilizer in late fall or early spring before the timothy starts to grow.



Timothy seed variety trial.
Photo courtesy of Nigel Farley,
Agriculture and Agri-Food Canada

Source: Timothy Seed Production in Western Canada

[http://www1.agric.gov.ab.ca/\\$Department/deptdocs.nsf/all/agdex8696](http://www1.agric.gov.ab.ca/$Department/deptdocs.nsf/all/agdex8696)

The Efficacy of the Insecticides of Lesser Clover Leaf Weevil in Established Red Clover

Julie Soroka, Saskatoon Research Centre, Agriculture & Agri-Food Canada

The Saskatchewan Forage Seed Development Commission funded a study on the efficacy of the insecticides Cygon, Decis and Sevin XLR for the control of lesser clover leaf weevil in established red clover. The study was completed by Julie Soroka of Agriculture and Agri Food Canada. Here are the findings in table form.

The study was of eight spray treatments, four replicates, plot size 36m². Spray dates - all three insecticides were sprayed June 6, when clover was in early vegetative stage (early



Walsyn's photostream
www.flickr.com

spray). On June 23, when clover was budding, Decis and Sevin XLR were sprayed on previously unsprayed plots (late spray), and on plots previously sprayed on June 6 (early and late spray).

Application rates - Cygon 480 - 0.40 L/acre, Decis 5EC - 0.10 L/acre, Sevin XLR Plus - 1.09 L/acre.

Conclusions: The Decis two-spray treatment plots had the lowest number of lesser clover leaf weevils at all three sites, although the

number of weevils at the Carrot River site were considerably lower than at the other two sites. Foliar injury was lowest in the Decis two-spray plots in the Arborfield plots, while differences in clover foliar damage were not found among treatments at Carrot River. Highest seed yields were found in Decis two-spray and Decis late spray plots at Arborfield. Sevin XLR early spray plots had higher seed yields than did Control or Decis early spray plots in the second year field at Carrot River. Cygon does not appear to be effective in controlling lesser clover leaf weevil.

SITE 1. Location: Arborfield - first year double cut red clover

Treatment	No. lesser clover leaf weevils per five shoots					Seed yield (kg/ha)
	June 13	June 20	June 26	July 4	July 12	
Control	13.0 a	18.5 a	17.8 a	9.8 ab	4.8 ab	168 bc
Cygon	9.8 ab	11.0 ab	13.5 a	12.5ab	8.2 a	140 c
Decis early spray	2.8 b	2.2 c	5.0 a	5.8 bc	4.5 ab	286 ab
Decis late spray	7.5 b	11.8 ab	11.0 a	3.8 cd	1.8 bc	367 a
Decis early & late	4.2 b	5.8 bc	4.0 a	2.8 d	0.5 c	366 a
Sevin XLR early	8.2 ab	10.0 ab	9.5 a	11.5ab	4.0 b	187 bc
Sevin XLR late	5.8 b	15.5 ab	13.2 a	13.2 a	5.5 ab	171 bc
Sevin XLR early & late	8.8 ab	11.2 ab	6.8 a	8.8abc	3.5 bc	215 bc
LSD (P=0.05)	8	9.8	10.1	8	4.8	132
CV	72.5	61.8	68.1	64.1	79.4	37.7

Plots unsprayed
Plots sprayed once
Plots sprayed twice

Measurement of foliar damage - damage ranked from highest to lowest:

Treatment	Leaf damage (ranked 1-8, highest - worst)				
	June 13	June 20	June 26	July 4	July 12
Control	8 a	8 a	6 a	7 ab	6 ab
Cygon	3a	7a	4a	5ab	7a
Decis early spray	2 a	3 a	5 a	2 c	4 c
Decis late spray	6 a	6 a	8 a	4 ab	2 c
Decis early & late	1 a	1 a	1 a	1 c	1 c
Sevin XLR early	4 a	2 a	3 a	6 ab	3 c
Sevin XLR late	7 a	4 a	7 a	8 a	8 a
Sevin XLR early & late	5 a	5 a	2 a	3 bc	5 bc
P#	0.49	0.57	0.68	0.003	0.0006

Treatment	Stipule damage (ranked, highest - worst)				
	June 13	June 20	June 26	July 4	July 12
Control	8 a	8 a	5 a	5 a	6 ab
Cygon	1 a	7 a	8 a	8 a	7 ab
Decis early spray	5 a	1 a	1 a	2 a	4 bc
Decis late spray	6 a	5 a	3 a	7 a	2 c
Decis early & late	3 a	3 a	2 a	1 a	1 c
Sevin XLR early	7 a	6 a	4 a	4 a	5 bc
Sevin XLR late	4 a	4 a	7 a	3 a	8 a
Sevin XLR early & late	2 a	2 a	6 a	6 a	3 bc
P#	0.99	0.26	0.38	0.06	0.01

Treatment	stem damage (ranked, highest - worst)				
	June 13	June 20	June 26	July 4	July 12
Control	8 a	8 a	2 a	3 a	4 abc
Cygon	7a	2a	6a	8a	7 ab
Decis early spray	3 a	1 a	1 a	2 a	5 abc
Decis late spray	1 a	4 a	4 a	6 a	1 c
Decis early & late	6 a	5 a	5 a	1 a	2 c
Sevin XLR early	2 a	3 a	8 a	7 a	6 abc
Sevin XLR late	4 a	7 a	3 a	4 a	8 a
Sevin XLR early & late	5 a	6 a	7 a	5 a	3 bc
P#	0.58	0.74	0.52	0.20	0.04

(Continued on page #4)

Site 2: Arborfield - double cut first year seed harvest

Treatment	No. lesser clover leaf weevils per five shoots					Seed yield (kg/ha)
	June 13	June 20	June 26	July 4	July 12	
Control	8.0 abcd	8.0 abc	5.3 a	9.0 ab	6.0 ab	196 bc
Cygon	8.0 abcd	15.5 ab	8.5 a	10.0 ab	10.0 a	184 c
Decis early spray	2.3 d	1.3 c	4.5 a	4.5 bc	3.0 b	285 abc
Decis late spray	13.8 a	12.0 abc	9.3 a	4.3 bc	1.5 b	327 ab
Decis early & late	4.0 cd	4.7 bc	7.3 a	1.5 c	1.0 b	367 a
Sevin XLR early	7.5 bcd	16.0 a	2.0 a	8.0 abc	8.5 a	176 c
Sevin XLR late	8.5 abc	7.3 abc	6.3 a	11.3 a	10.0 a	176 c
Sevin XLR early & late	11.3 ab	5.3 abc	8.7 a	7.3 abc	5.0 ab	255 abc
LSD (P=0.05)	6.0	10.8	9.7	6.6	5.1	135
CV	51.5	83.6	102.1	63.9	61.2	37.5

Treatment	Leaf damage (ranked, highest - worst)				
	June 13	June 20	June 26	July 4	July 12
Control	3 bc	7 a	4 a	8 a	7 ab
Cygon	1 c	4 a	6 a	3 a	6 ab
Decis early spray	4 bc	3 a	1 a	2 a	1 c
Decis late spray	7 a	8 a	7 a	4 a	2 c
Decis early & late	5 abc	1 a	2 a	1 a	3 bc
Sevin XLR early	2 bc	6 a	5 a	5 a	5 bc
Sevin XLR late	6 ab	5 a	8 a	7 a	8 a
Sevin XLR early & late	8 a	2 a	3 a	6 a	4 bc
P#	0.0146	0.5140	0.3168	0.1262	0.0166

Treatment	Stipule damage (ranked, highest - worst)				
	June 13	June 20	June 26	July 4	July 12
Control	4 a	4 a	3 a	8 a	5 a
Cygon	1 a	7 a	4 a	7 a	6 a
Decis early spray	2 a	1 a	1 a	1 a	1 a
Decis late spray	5 a	8 a	6 a	3 a	2 a
Decis early & late	3 a	3 a	2 a	2 a	4 a
Sevin XLR early	6 a	6 a	7 a	4 a	7 a
Sevin XLR late	8a	5a	8a	6a	8a
Sevin XLR early & late	7 a	2 a	5 a	5 a	3 a
P#	0.4962	0.1924	0.7596	0.1182	0.4012

Treatment	stem damage (ranked, highest - worst)				
	June 13	June 20	June 26	July 4	July 12
Control	4 abc	1 a	1 a	8 a	5 a
Cygon	7 ab	5 a	7 a	7 a	4 a
Decis early spray	2 bc	3 a	2 a	1 a	2 a
Decis late spray	5 abc	4 a	4 a	3 a	1 a
Decis early & late	3 abc	2 a	8 a	6 a	7 a
Sevin XLR early	8 a	6 a	6 a	2 a	6 a
Sevin XLR late	1c	8 a	5 a	5 a	8 a
Sevin XLR early & late	6 ab	7 a	3 a	4 a	3 a
P#	0.0769	0.9402	0.7720	0.1201	0.7872

Site 3: Carrot River - second year red clover seed field, heavy trash cover from previous year, uneven stand density.

Treatment	No. lesser clover leaf weevils per five shoots					Seed yield (kg/ha)
	June 13	June 20	June 26	July 4	July 12	
Control	5.0 ab	4.5 b	2.7 ab	4.0 ab	2.0 a	191 c
Cygon	4.7 ab	6.8 ab	4.5 ab	4.7 ab	3.7 a	211 abc
Decis early spray	3.3 b	2.5 b	6.7 a	5.5 a	2.3 a	196 bc
Decis late spray	4.3 b	2.7 b	3.7 ab	1.5 b	0.3 a	269 ab
Decis early & late	5.0 ab	4.5 b	6.0 ab	1.5 b	1.5 a	240 abc
Sevin XLR early	2.0 b	4.3 b	2.0 b	2.5 ab	1.3 a	279 a
Sevin XLR late	10.0 a	10.0 a	5.3 ab	6.3 a	3.5 a	226 abc
Sevin XLR early & late	6.5 ab	5.0 b	5.0 ab	4.8 ab	4.0 a	225 abc
LSD (P=0.05)	5.6	4.4	4.7	3.8	3.8	76.0
CV	75.2	59.3	71.3	67.3	112.3	22.5

Treatment	Leaf damage (ranked, highest - worst)				
	June 13	June 20	June 26	July 4	July 12
Control	4 a	1 a	6 ab	5 a	5 a
Cygon	7 a	3 a	3 bc	8 a	8 a
Decis early spray	1 a	6 a	8 a	7 a	4 a
Decis late spray	2 a	5 a	2 bc	3 a	2 a
Decis early & late	6 a	8 a	7 ab	2 a	1 a
Sevin XLR early	3 a	2 a	1 c	1 a	3 a
Sevin XLR late	8 a	7 a	5 ab	6 a	7 a
Sevin XLR early & late	5 a	4 a	4 abc	4 a	6 a
p#	0.2082	0.3590	0.0359	0.1163	0.4965

Treatment	Stipule damage (ranked, highest - worst)				
	June 13	June 20	June 26	July 4	July 12
Control	2 c	4 a	4 a	5 abc	3 a
Cygon	1c	5 a	3 a	7 ab	8 a
Decis early spray	5 abc	3 a	7 a	8 a	7 a
Decis late spray	3 bc	2 a	2 a	3 bc	2 a
Decis early & late	4 bc	6 a	8 a	2 c	1 a
Sevin XLR early	8 a	7 a	1 a	1c	4 a
Sevin XLR late	7 a	8 a	5 a	6 ab	6 a
Sevin XLR early & late	6 ab	1 a	6 a	4 abc	5 a
P#	0.0402	0.4733	0.2102	0.0474	0.6925

Treatment	stem damage (ranked, highest - worst)				
	June 13	June 20	June 26	July 4	July 12
Control	2 bc	5 a	3 a	4 a	2 a
Cygon	5 bc	7 a	4 a	8 a	8 a
Decis early spray	1c	3 a	7 a	7 a	5 a
Decis late spray	3 bc	1 a	1 a	3 a	4 a
Decis early & late	4 bc	6 a	6 a	2 a	1 a
Sevin XLR early	6 abc	4 a	2 a	1 a	6 a
Sevin XLR late	7 ab	8 a	5 a	6 a	7 a
Sevin XLR early & late	8 a	2 a	8 a	5 a	3 a
P#	0.0635	0.2234	0.7036	0.3454	0.8476

SASKATCHEWAN FORAGE SEED

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Mark your calendar:

Field Day

July 16th at 1:00 pm.

Starting at **Farm Pure Global** in Nipawin.