2008 Guide
SaskSeed
Saskatchewan Seed Growers Association

Contents

ON THE COVER:

Analysts predict strong oilseed prices in 2008 and prairie canola producers are looking ahead to a good year. In Saskatchewan, canola production in 2007 rose 6.8 percent to 3.9 million tonnes and harvested acreage rose to a record 7.2 million acres, according to Statistics Canada. The previous record of 6.6 million acres was set in 1999.

WP photo by Michael Raine

Seed Growers List

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Saskatchewan Seed Growers Association

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"Varieties of Grain Crops 2008"
24-page pullout included
with this guide

Looking Ahead

See our convenient variety recommendation lists for a closer look at new varieties being developed for Saskatchewan producers.

President's Message

We have come to the end of another challenging year with producers facing conditions that ranged from drowned to drought, from cool and damp to intense heat.

Now is the time when the past season is reviewed and plans made for the next — and this magazine is a great place to start that review process.

The SaskSeed Guide is a valuable reference tool that provides accurate, third party evaluation of how varieties perform under different growing conditions in various regions of the province. It also contains the latest updates on agronomic issues, as well as comments and insights by crop coordinators and plant breeders.

Whether you want to improve returns by selling into identity preserved markets, find feed to provide better nutritional value for livestock or select crops that stand up better in drought conditions, the SaskSeed Guide contains information about varieties best suited for the task.

Saskatchewan Seed Growers have partnered with Western Producer Publications and stakeholder members of the Saskatchewan Variety Performance Group to provide this information to producers at no charge. Emphasis is continually placed on improving the data collection and reporting process to provide the most relevant information possible.

Your local seed grower is also an excellent source of information when it comes to the agronomic challenges of growing that crop. For more than 100 years, seed growers have been transferring the technology demanded by consumers and farmers and developed by plant breeders. Your local seed grower uses those same stringent, quality control procedures developed over the past century to ensure you get pure seed with the characteristics you're looking for. And, they already have several years of experience growing that new variety.

The climate and growing conditions of our province are ever changing, but there is one thing that does not change — the value of certified seed. The Blue Tag guarantees that the seed farmers plant maintains genetic purity, good germination, uniform maturity and minimum disease levels.

Having a reliable starting point in the face of constant change can help make the planning process easier.

I would like to take this opportunity to wish you every success in 2008, and may the coming year be a safe and profitable one.

Joe Rennick, President
Saskatchewan Seed Growers Association

FILE PHOTO

Looking back, looking ahead, looking good

BY SHIRLEY BYERS
Freelance writer

Pedigreed seed growers assess seed supplies and seeding trends across Saskatchewan.

PEDIGREED SEED GROWERS in Saskatchewan contended with flooding in the north, gophers in the south and a scorching hot July in 2007.

But in spite of the challenges, seed growers across the province report a satisfactory harvest with ample supplies of good quality seed.

Wet in northern regions

Seed growers in the north are keeping an eye on germination counts this winter. A long, damp fall punctuated with frost could affect the viability of stored seed.

"I would feel there will be some germ loss in some crops. Whether it will be enough to be a problem, we can't say yet," said Ken Clancy, a seed grower from Carrot River, Sask., in the province's northeast.

"(Growers will) have to check germs carefully. They may be good now but we could lose germ by spring."

Seed grower Steve Tomtene agreed, suggesting that some sprouting may have occurred.

"It's possible there could be some sprouting but it wasn't visible in the seed," said Tomtene from Birch Hills, Sask.

"I think there may be some seed damage in relation to the high moisture and frequent frosts in the fall – it weakened the seed a little bit so there could be some concern around barley seed quality going into next spring."

At Moose Jaw, Sask., Craig McDougal said he's heard some talk of the extreme heat in July affecting germination counts in durum.

Further west, at Shaunavon, Sask., seed grower Gerald Girodat said he isn't worried about durum, although some was on the light side, coming in at 59 to 63 pounds per bushel.

He is more concerned with his pea crop.

Hot dry conditions at harvest caused a lot of mechanical damage to the seeds.

If peas have sustained cracks on the inside, the seed will germinate but will not produce a viable plant. He advised growers to get a professional analysis of any peas they plan to use for seed.

Yield wise, growers across the province are reporting an average year. At Maidstone, in the northwest part of the province, Laurie Wakefield said that from the last week of June until the middle of August, the weather was extremely hot and dry.

Harvest was drawn out by heavy dews and short days and the last crops didn't come off until the first week in October. There was some wheat midge damage and a small amount of sprouting in some locations, but for the most part, yields were pretty satisfactory, he said.

A look ahead

Wakefield anticipated good demand for most varieties of peas, malting barley and possibly low protein wheats for ethanol production. He didn't foresee shortages in any seed in his area.

At Birch Hills, spring flooding in some areas delayed seeding until well into June and damp, cloudy, cool weather dragged out the harvest until early November.

Increased precipitation and warmer weather have increased disease levels in the area. Septoria on wheat, net blotch on barley and sclerotinia on canola reduced some yields. There was also more wheat midge pressure.

Tomtene said he expects good demand for some of the Canadian Prairie Spring and soft white wheat varieties.

Soft white wheat varieties are typically high yielding, lower protein wheats that are well suited for ethanol production.

Now that the price difference between them and other wheats has evened out, it will be more advantageous for farmers to grow them, Tomtene said.

"I think they will be popular in our area. I think in general, barley's going to be fairly strong as well."

In particular, Tomtene anticipated good demand for Copeland barley.

"It's a newer two-row variety that yields a little better than Metcalfe which is the standard. I think there'll be some migration into some of the newer two-row varieties – possibly Newdale to a smaller degree."

Yield pootential will affect farmers' choice of varieties, he added.

"Producers are trying to get some better agronomics while still keeping their malt opportunity open."

For six-row barley, he's expecting Legacy and Tradition to continue to be popular but he sees more interest in Lacy as well.

Producers in north central Saskatchewan had good luck with canola last year and Tomtene expects InVigor canolas to be in high demand again.

As for oats, there was high demand last year and reduced supplies of oat seed available.

In 2007, a lot of producers planted varieties that weren't their first choice. They might be anxious to upgrade their oat varieties while supplies are available.

" I believe Orrin, Jordan, possibly Leggett are some that could be in demand going into next year," he said.

Tomtene didn't foresee a shortage of any seed other than barley if germination turns out to be a problem.

At Carrot River, Clancy said farmers concerned with excess moisture and later seeding dates are asking about earlier maturing wheat varieties.

He also expects to see an increase in barley acreage and predicts that higher nitrogen prices could cause an increase in pulse acreage in the area.

Germination loss due to the wet, frosty fall would be the only factor that might cause seed shortages.

"A lot of people haven't done germ tests yet so we don't really know," he said.

At Moose Jaw, McDougal said the extreme heat pushed the endurance of crops last summer but producers managed to harvest an average crop. The yield wasn't as high as in 2006 but the quality was good.

"I suspect a lot more durum will go in the ground with the price that it is," he said.

"Varieties of durum will be hot commodities. We're getting calls for peas and lentils as well. Red lentils, peas, durum and flax look like strong demands."

McDougal also said there is interest in the CWRS wheat Lillian. The new variety offers agronomic benefits along with sawfly resistance.

At Shaunavon, Girodat also thinks high durum prices will increase demand but he doesn't foresee a shortage of seed.

Strongfield will probably be popular again, along with Navigator, he said.

The wheat stem sawfly continues to be a production issue in the province's southwest but Girodat said demand for the newer sawfly resistant variety, Lillian, might decline because quite a few producers have the variety now.

PHOTO BY MICHAEL RAINE

Saskatchewan farms could be getting more precipitation than usual over the next few months, according to Environment Canada. Forecasters are also predicting a summer with above normal temperatures and rainfall.

Environment Canada offers cold, wet forecast

BY DARLENE POLACHIC
Freelance writer

Prairie farmers should brace for a cool, damp spring, says Canada's national weather service.

WHAT WILL THE weather be like in Saskatchewan this year?

It's a question thousands of farmers are asking and one to which few people know the answer.

According to meteorologists, predicting weather patterns over the long-term is a risky business.

Nonetheless, weather prognosticators at Environment Canada have offered a few predictions.

For starters, Canadians should brace for a bitter winter.

In early December, Environment Canada said winter temperatures would be unusually cold for most of the country.

Temperatures throughout January and February are expected to be below normal in all areas with the possible exception of the Far North and southwestern Ontario.

In Saskatchewan, there is little chance that average winter temperatures in January and February will rise above normal values.

As for spring, the news does not look much better.

Bob Cormier, a meteorologist with Environment Canada, says long-term forecasts for the Prairies are calling for a cold, wet spring and a summer with above normal temperatures and precipitation.

And La Nina, the phenomenon that involves cooler than normal ocean surface temperatures in parts of the Pacific Ocean, may be a factor.

Environment Canada's best prediction is that the weak La Nina situation that developed in late 2007 will bring temperatures that are one to 1.5 degrees lower than normal to all parts of Saskatchewan for the next four months.

According to Cormier, precipitation for January and February will likely be above normal for the southwest part of the province and normal elsewhere in the province.

For March through August, above normal precipitation is predicted.

La Nina conditions have been a boon for Australian farmers who may be coming out of the country's worst drought in 100 years.

Over the past few years, crop failures Down Under have helped propel global wheat prices to record heights.

La Nina normally promises cooler temperatures and increased precipitation for eastern and northern parts of Australia.

According to Cormier, Environment Canada weather predictions are determined in three-month blocks.

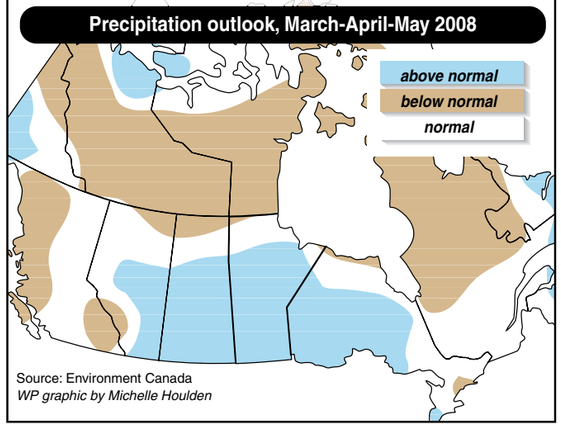
The winter period covers December, January and February; the spring period covers March, April and May; and the summer period covers June through August.

In Saskatchewan, Environment Canada offers temperature predictions for two roughly divided geographical areas: the northeast grainbelt and the southwest area.

The average normal temperature for Saskatchewan's northeast grainbelt in the December-January-February

Good rain for spring?

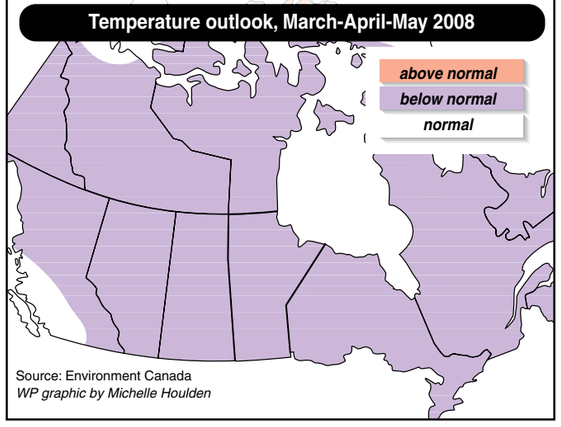
In its precipitation outlook issued Dec. 1, Environment Canada is calling for above normal precipitation for much of the Prairies, while northern regions are forecast to get less than average precipitation. The agency's three-month outlook has a historical accuracy rating of 0 to 45 percent for most areas.



Source: Environment Canada
WP graphic by Michelle Houlden

Cool weather forecast

In its temperature outlook issued Dec. 1, Environment Canada is calling for below normal temperatures across most of the country, with only small pockets expected to have normal or above normal temperatures. The agency's three-month outlook has a historical accuracy rating of 50 to 70 percent for most areas.



Source: Environment Canada
WP graphic by Michelle Houlden

winter season is -17 C, plus or minus one degree, Cormier said.

In the southwest, the average winter normal is -10 C.

For the spring period, average temperatures are 0 C in the northeast and 5 C in the southwest.

Environment Canada also offers two average values for precipitation in Saskatchewan.

The first one covers the southeastern part of the province, and the other covers the remainder of the province.

In southeastern Saskatchewan, around 75 millimetres of precipitation is normal for the winter period.

The average winter value for the remainder of the province is 75 to 100 mm, give or take about 10 mm.

"Precipitation is measured in millimetres, so with snow, the measurement is the moisture the snowfall contains," Cormier noted.

"It indicates the depth of water in millimetres that would be produced if the snow were melted."

According to Cormier, weather maps for Environment Canada's three-month forecasts are generated by a computer model that measures various climactic and atmospheric conditions.

These include current weather patterns, ice patterns over the oceans and ocean temperatures collected by buoys and satellite infrared imagery.

"Beyond the three month forecast, (weather) predictions are strictly related to past years where the sea surface conditions have been similar," he said.

"Sea surface temperatures are the key. They reflect ocean currents which are always changing, and assess what the predominant winds are doing over certain parts of the ocean."

Sea surface temperatures are generally considered to be normal, or they may be influenced by El Nino and La Nina conditions.

El Nino or La Nina regimes tend to be cyclical, but they are complex and are not necessarily predictable, he said.

When an El Nino situation results in warmer ocean temperatures, Western Canada tends to have a dryer, warmer than normal winter and spring.

"Currently we have a moderate La Nina situation," Cormier said.

"There are colder than normal temperatures in the eastern equatorial Pacific off the west coast of South America. La Nina develops when the trade winds in the equatorial zones are stronger than normal. They blow north to northeast, blowing the warmer water on the surface ahead of it, causing the cooler water underneath to up-well. This cools the air and disturbs the normal atmospheric patterns."

So how will this impact the Canadian Prairies?

"La Nina generally — though not always —causes winter and spring temperatures to be colder than normal on the Prairies, and precipitation to be above normal," Cormier said.

"If it always worked out that way, it would be very easy to make predictions, but it isn't. We see years when we have La Nina, but don't have cold, wet springs. Changes in ocean temperatures are also hard to forecast."

Farmer's Almanac forecast more appealing

According to the Old Farmer's Almanac, prairie temperatures this winter should be about 2C above normal for prolonged periods, with slightly more precipitation than normal.

As well, snowfall in southern Saskatchewan should be above normal, but the rest of the province will be receiving less snowfall than usual.

The coldest temperatures, according to the almanac, will occur in early to mid-January and mid-February, with heavy snow most likely to fall in late January and early March.

April will begin with rain and snow, but overall conditions throughout April and May should be warmer and drier than normal, the almanac says.

Summer temperatures will be one to two degrees above normal, with the hottest periods in late June, early and mid-July and early August.

— POLACHIC

Nothing Outperforms.

Your bag of InVigor® is filled with more than just seed. It comes packed with years of research, investment and innovation. For ten years, this technology has provided the highest yielding hybrids to canola growers across Canada. This is the story of how InVigor has grown.

1983 — In 1983, Bayer CropScience researchers in Gent, Belgium invented a hybridization system created through a unique molecular pollination control system known as SeedLink. Over the course of 11 years, that hybridization system was developed and perfected in what we now know as InVigor hybrid canola seed.

1996 — The first internal Bayer CropScience hybrid breeding trials are conducted in Canada.

Manual pollination to test hybrid crosses.

1997 — InVigor hybrid canola is commercially launched to farmers in Canada.

1998 — Bayer CropScience establishes a canola research facility at Innovation Place near the University of Saskatchewan.

Basic seed production in B.C.

Canola breeding farm near Saskatoon.

1999 — Hybrid canola is planted to approximately 15% of all Canadian canola acreage.

2000 — Bayer CropScience purchases land north of Saskatoon, SK to develop a canola breeding farm and research station.

2001 — InVigor plant breeders begin pre-basic and basic seed production in the interior of British Columbia. Seed multiplication still occurs in British Columbia and in the winter, contra seed production takes place in Australia.

Australia and B.C. are key locations because of their isolation from other canola growing regions. Male and female parent seed from B.C. and Australia are used to produce certified hybrid canola seed near Lethbridge, Alberta.

2002 — Severe droughts in western Canada plague Prairie farmers in 2001 and 2002. In 2004, an early frost hits much of the Canadian Prairies. It was InVigor's performance in these tough years that convinced growers InVigor delivers the highest profit potential with the lowest risk.

Greenhouses in Saskatoon.

2003 — Bayer CropScience makes a significant investment to add to its already impressive research station and breeding farm near Saskatoon.

2004 — Bayer CropScience turns the soil for construction of a new $8 million canola seed processing facility at Lethbridge, Alberta.

Seed processing facility.

Today, the Lethbridge facility receives InVigor certified seed from commercial seed growers for cleaning, treating with seed protectants and packaging for sale throughout Canada.

2005 — Hybrid canola accounts for more than 65% of all Canadian canola grown. InVigor counts for 65% of all hybrids grown.

2006 — Two new commercial InVigor hybrids are launched: InVigor 5440 and 8440. These two hybrids are expected to set the new yield standards for canola hybrids and varieties in Canada.

2007 — Bayer CropScience launches InVigor Health, its new line of specialty hybrids designed specifically for the specialty canola oil market.

InVigor

Bayer CropScience is committed to supporting its leading InVigor brand and Canada's canola industry with investments in research and development, improved agronomy and specialty canola hybrids suited to new end-use markets.

InVigor breeders continue their quest for improved quality and yield. They are targeting their efforts on identifying germplasm with:

- greater stress tolerance
- greater resistance to pod shattering
- resistance to a broad range of diseases
- higher oil and protein content
- specialty fatty acid profiles for healthy edible oils
- specialty canola hybrids with higher biofuel yield potential

InVigor hybrids have shown an average yield increase of 2.9% annually since their introduction in 1997.

Bayer CropScience

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FILE PHOTO

Until now, spraying was the only way to reduce losses caused by the wheat midge. However, chemical control kills beneficial insects as well as the wheat midge.

Stewardship essential to protect midge-resistant gene

BY SHIRLEY BYERS
Freelance writer

Farmers, seed growers and plant breeders must work together to protect a valuable genetic resource.

IN 2006, THE wheat midge cost Western Canadian farmers about $40 million.

That figure included yield reductions valued at $19.4 million and losses of $20.9 million related to grade reductions, said Ron DePauw, a wheat breeder at Agriculture Canada's Semi-Arid Prairie Agricultural Research Centre in Swift Current, Sask.

DePauw expects those numbers to drop significantly with the introduction of two new varieties of hard red spring wheat that he and fellow breeder Stephen Fox of Agriculture Canada in Winnipeg have developed.

The new varieties, Goodeve and Unity, have both been registered by the Canadian Food Inspection Agency and are the only wheat varieties that offer resistance to the wheat midge.

The midge resistant gene, known as Sm 1, was discovered in soft red winter wheat from the United States.

Through cropping and back cropping, it has been bred into varieties of Canada Western Hard Red Spring wheat, said DePauw.

The Sm 1 gene causes the wheat plant to produce two compounds, ferrulic acid and p-comaric acid.

When the midge larvae feed on the kernels, the two compounds slow and inhibit larvae growth.

Some larvae will progress further than others but very few will survive.

DePauw emphasized that the new varieties offer resistance but not immunity. Because a few midge are able to overcome the resistance and attain adulthood, it's very important to prevent the build up of resistant insects.

This can be done by growing a varietal blend, a midge-resistant wheat variety blended with a susceptible variety, said DePauw.

In a varietal blend, between 90 and 95 percent of the plants are resistant and the rest are susceptible.

Very few midge hatched on the resistant wheat would overcome the midge-resistant gene and attain adulthood. Those that did would be statistically more likely to mate with a midge hatched on the susceptible plants, thus decreasing the likelihood of passing on the ability to overcome the midge-resistant gene.

DePauw and Fox stressed that the new varieties are not genetically modified.

"We made crosses, then selected for midge resistance," Fox said.

"The gene is selected by looking for evidence of its expression in the field.… It's selective breeding, the same as we've been doing for the past 100 years."

The Sm 1 gene will also allow beneficial insects to thrive, DePauw added.

FILE PHOTO

Midge cycle varies with conditions

THE FEMALE ADULT midge emerges from the pupal stage in late June or early July and begins laying eggs on newly emerged wheat heads.

In a life span of less than seven days, each female lays about 80 eggs.

The eggs hatch in four to seven days and the small, orange larvae begin feeding on the surface of the developing wheat kernels.

After two or three weeks of feeding, the larvae bury themselves in the soil but, if conditions are dry, they may remain in the wheat head, in a state of arrested development, until harvest.

However, most midge larvae spend the winter in the top five centimetres of soil in round cocoons where they can remain dormant for several years.

If conditions are favourable in the spring, larvae will move to the soil surface and pupate.

Depending on the temperature, soil moisture conditions and geographic location, adult emergence and egg laying will begin in late June or early July and continue for up to six weeks.

— BYERS

"When we apply insecticides … we are indiscriminately killing all the other insects in that field and there are beneficial insects as well," he said.

"If these insects are not killed, they are able to reduce the populations of midges as well."

Stewardship of the resistance gene

The CFIA is making regulatory changes to allow for certification of these varietal blends of wheat.

It's expected they will complete those changes this year, DePauw said.

The Sm 1 gene is the only midge resistant gene known to plant breeders throughout the world, he added.

"It's going to require the participation of all producers to protect this one gene that we have. All farmers will have to participate in the protection of this Sm 1 gene and that is by growing the variety together with a susceptible refuge."

FarmPure Seeds holds the marketing rights for Goodeve and SeCan has the marketing rights for Unity.

Goodeve will be available for commercial sale in 2009 and Unity should be available by 2010.

Jim Downey, research and development manager at SeCan, said that while his company is increasing the seed, the larger task is creating a new model for growing a wheat variety in Western Canada.

"We don't want to make it difficult, complex or expensive to produce the blend or grow the blend or get it to market," he said.

"We want as many seed growers as we can producing these midge resistant varieties of the blend and having it widely available so the seed is not prohibitively expensive."

Agriculture Canada is conducting a study to look at the stability of the blend, Downey added.

"We're looking to that to help us figure out how often producers should renew their seed supply; how often they should buy pedigreed seed. We assume it will be more often than usual and so that will be our basis for making recommendations.… There's going to be a sort of whole industry stewardship approach. We want to have buy in from all sectors… so we can preserve this trait."

FILE PHOTO

If managed properly, midge resistant wheat varieties could save Saskatchewan producers millions of dollars in pest related losses for years to come. The lifespan of the adult wheat midge lasts only a few days but during that time, a single female insect can lay as many as 80 eggs.

Downey said it looks like the midge resistant varieties will offer competitive yields.

In testing at different levels of production, they have shown yield advantages of as much as 20 percent over the check variety, AC Barrie.

Other traits include good leaf rust resistance and decent protein levels.

"Overall they looks like a fairly nice package for farmers to produce," he said.

U.S. scientists head off world wheat threat

UNITED STATES DEPARTMENT OF AGRICULTURE
Agricultural Research Service

WHEAT BREEDERS AND scientists at the U.S. agricultural research service are counting on a "southern strategy" to protect North American wheat growers from Ug99, a strain of wheat stem rust disease that has spread from Africa to the Arabian Peninsula.

The fungal strain of stem rust was named for its discovery in Uganda in 1999.

The disease spreads by wind-blown fungal spores.

Planting highly resistant wheat varieties in the southern United States where stem rust fungus can survive winter could prevent the disease from taking hold and then spreading to the rest of the country during the growing season.

Ug99 has overcome most of the stem rust resistance genes bred into wheat varieties during the past several decades.

Last year, ARS Cereal Disease Laboratory plant pathologist Yue Jin confirmed a new, even more virulent variant of Ug99 in Kenya.

His colleague, geneticist Les Szabo, also at the CDL in St. Paul, Minnesota, leads the stem rust genome project.

The CDL is the primary facility in the United States for identifying various forms of stem rust and other cereal rusts, such as wheat leaf rust and oat crown rust.

Jin and Szabo are part of a team of ARS scientists in laboratories across the United States working with breeders to put resistance genes into wheat and barley varieties.

Planting highly resistant wheat varieties in the southern United States where stem rust fungus can survive winter could prevent the disease from taking hold and then spreading to the rest of the country during the growing season.

They rely on four ARS regional genotyping laboratories to search for breeder-friendly DNA markers used to locate disease resistance genes.

Nationally, ARS scientists and university co-operators have planted susceptible and resistant wheat varieties at various locations around the country to watch for new rust strains.

Internationally, ARS provided funds and expertise to the Global Rust Initiative, formed in 2005 to fight new strains of the disease.

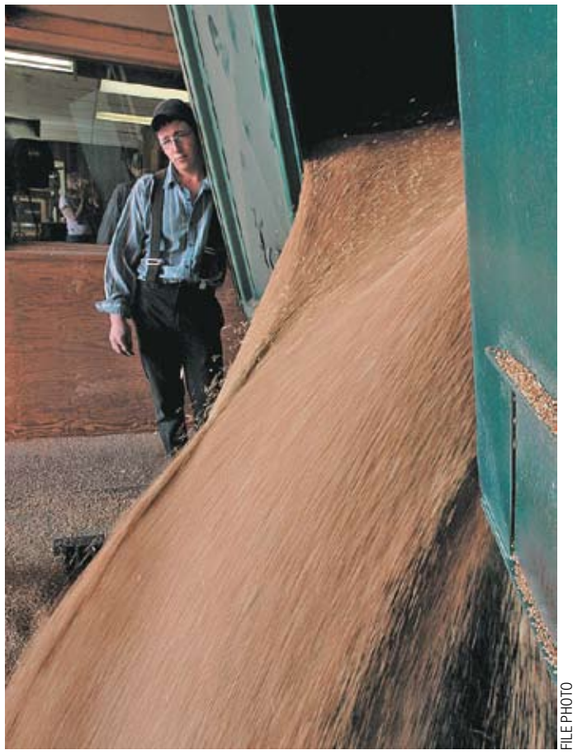
More information about the research is available online at *http://www.ars.usda.gov/is/AR/archive/nov07/wheat1107.htm*

The ARS is the USDA's chief scientific agency.

Canada prepares move from kernel visual distinguishability

BY DEBORAH SPROAT
Freelance writer

Plans to eliminate the controversial system are in place, but not everyone is convinced the proposed changes will occur.



FILE PHOTO

Eliminating kernel visual distinguishability will likely require farmers to sign affidavits, specifying the type of wheat being delivered.

KERNEL VISUAL distinguishability, or KVD, has been the subject of intense debate in recent years, with cereal breeders arguing it hampers efforts to get new varieties registered and the grain trade insisting it's necessary to ensure uniform quality.

Now, the requirement that kernels in one class of grain must be visually distinguishable in colour and shape from those in another class appears to be on the way out.

The Canadian Grain Commission plans to eliminate KVD from all minor classes of wheat beginning Aug. 1, 2008.

Varieties in the minor classes must still be visually distinguishable from varieties in the major classes, Canadian Western Red Spring and Canadian Western Amber Durum.

The federal government has also announced plans to remove KVD as a registration requirement for the hard red spring and durum wheat classes by Aug. 1, 2010, and there are suggestions that this may happen even sooner.

Norm Woodbeck, manager of quality assurance standards for the Canadian Grain Commission, said it is likely that farmers delivering grain in minor classes after KVD is eliminated next August will be asked to sign an affidavit declaring the class.

Though exact details are still being worked out, it is expected there will be random checks across the Prairies and at port using DNA technology to ensure the class is correctly identified.

He said industry discussions are ongoing concerning penalties for making a false declaration, as well as what happens if a mistake is made.

Woodbeck said a similar system of affidavits at the delivery point, backed by a monitoring system involving spot checks and lab testing, would be used when KVD is eliminated from the hard red spring and durum classes.

He expects elimination of KVD first on the minor classes and then on major classes of wheat to proceed as planned.

"There is nobody out there resisting it right now that I'm aware of," Woodbeck said.

"Everybody is looking at it that this is a done deal. We are moving ahead. Hopefully what we learn with moving away from KVD on the minor classes, we'll use when we move ahead with the red spring and the amber durum. Those are our two main classes and we want to protect the integrity of those classes."

He said communicating the implications of the changes to producers will be important.

Some producers might think, for example, that they can bring in varieties from the United States and grow them.

But he said registration requirements will still be in place just as they are now.

"The only difference will be that in (the) future classes won't be distinguishable from one another. A red spring might look like a red winter. The only way you are going to be able to tell is by the declaration."

Brian Fowler

Plant breeders support change

For years, plant breeders have argued that KVD hampers efforts to develop and register new varieties. They say change is urgently needed.

Brian Fowler, a research scientist at the Crop Development Centre at the University of Saskatchewan, said improved varieties of winter wheat that offered higher yields, better disease resistance and better winter hardiness have been denied registration because of KVD. No new red winter wheats have been registered since 2001.

As recently as this year, two new red winter wheats were refused registration because of KVD requirements. Fowler said seed kernel shape can be affected by environmental conditions so it's possible to have a line pass KVD for two years, then fail the third year because some kernels resemble CWRS.

"It seems we are just wasting our time," Fowler said.

"There's a tremendous amount of resources going into variety development, which is just being wasted right now."

Anita Brule-Babel, a winter wheat breeder at the University of Manitoba, has also had promising varieties rejected because of KVD.

She said long before varieties reach the registration stage, KVD has an impact because many lines are removed from breeding programs simply because they don't meet the visual requirements.

Breeders welcome plans to eliminate KVD but, despite the flurry of activity, some are not optimistic that the 2010 deadline will be met.

"I'm very pessimistic we will see the changes come in by 2010," said Fowler.

A recent announcement that the CWB is providing $3 million to help find alternatives to KVD doesn't increase his optimism, he said, because similar projects in the past haven't produced results.

Brule-Babel said she's happy with the attempt to move away from KVD but she's not sure how far it will go.

"I've been in the business long enough to be skeptical," she said. "I think there are some people ready to move on. Others are much more cautious."

She said she realizes the importance of being able to keep the classes separate but this could be done by having an affidavit system with sufficient deterrents in place, an education program and reasonable monitoring.

"It works in other countries," she said.

Step in the right direction

Rob Graf, a winter wheat breeder at the Agriculture Canada research centre in Lethbridge, said the elimination of KVD on minor classes is a step in the right direction because it will get the industry used to the idea.

However, he said it doesn't help a lot from a breeder's standpoint because the real problem is the similarity between some winter wheat kernels and CWRS kernels.

"Until those kernels are allowed in the red winter wheat, I don't think it is going to help any," he said.

"We really are waiting for the day when KVD is eliminated in all the classes."

He said both the grain commission and the wheat board are working hard to meet the 2010 date for elimination of KVD on all classes., and he's hopeful that will happen.

"For winter wheat breeders, I think it will very certainly mean we will be able to register improved varieties, not just in terms of yields but also in terms of disease resistance and quality. It means we'll have the ability to bring things to market more efficiently and more quickly than in the past."

Doug Brown

Doug Brown, a research scientist at Agriculture Canada's Cereal Research Centre in Winnipeg, said KVD has also made it challenging to get his new Canadian Prairie Spring varieties registered. Again, the problem is kernels that resemble red spring wheat.

Brown thinks his own experience with an experimental line HY644 a few years ago may be one of the reasons KVD became an issue. HY644 had excellent fusarium resistance, which farmers badly needed at the time. But the variety was rejected after its third year of co-op trials because some kernels were too similar to CWRS.

" I think that had a lot to do with the groundswell saying we've got to do something about KVD, it's restricting what farmers can grow or have access to growing," he said.

Brown said he understands there is a push to have KVD removed and he feels its removal will improve chances of getting varieties that are high-yielding, with good disease resistance and good quality.

At the same time, it's important to ensure there's no negative impact on trade, he said.

FILE PHOTO

Ethanol production in Western Canada has created a need for new feedstocks such as high yielding, low protein wheat varieties with high starch content.

New general purpose wheat class to be launched this year

BY DEBORAH SPROAT
Freelance writer

CWGP wheat varieties will be suited for ethanol and livestock production.

CANADIAN WHEAT VARIETIES developed for the burgeoning ethanol industry or for use as livestock feed will soon have their own classification.

The new Canadian Western General Purpose, or CWGP, wheat class will be established Aug. 1, 2008, and will facilitate wheat varieties designed for fuel and livestock production, said Norm Woodbeck, manager of quality assurance standards for the Canadian Grain Commission.

Woodbeck said varieties in the new class will typically be higher-yielding. They will be required to meet agronomic and disease-resistance standards but will not be evaluated for milling and baking quality.

New varieties in the class can resemble varieties in other minor classes but cannot resemble hard red spring wheat or amber durum.

Wooodbeck added that kernel visual distinguishability requirements are expected to be lifted for all classes of wheat by Aug. 1, 2010, a development that could affect CWGP wheat varieties.

"If KVD was still there, then the wheat varieties developed for the general purpose class could not look like any of the other classes, which would severely hamper the breeding of new varieties because there's only so many characteristics you can breed into a kernel," Woodbeck said.

"We have eight classes now that take up most of those characteristics so to breed something brand new would be very, very difficult."

He said the CWGP class will have a two grade system, with details to be finalized at the spring meeting of the western grain standards committee.

Criteria for the No. 1 grade have been developed in discussion with the ethanol industry in Western Canada. Specifications for the No. 2 grade are identical to those for feed wheat.

Ready for takeoff

Woodbeck said the ethanol industry is looking for wheat varieties that offer characteristics such as high starch, heavy test weight and lower protein. Ethanol facilities will probably source by variety, he added. Red spring wheat isn't suited for ethanol because of its lower starch and higher protein.

"There was this misconception that the ethanol industry would just be a dumping ground, we could push anything in there," he said.

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PHOTOS BY STEVE DRAUDE

Soft white wheat varieties such as Bhishaj and AC Andrew appear to be well suited for ethanol production. Other experimental varieties are also being tested in prairie-wide trials.

"Far from it. The ethanol industry is looking for quality, specific quality."

As of mid-December, the first and only wheat to be registered as a CWGP variety was CDC Ptarmigan, a soft white winter wheat developed by cereal breeder Brian Fowler of the Crop Development Centre at the University of Saskatchewan.

Fowler said Ptarmigan is a high yielding and high starch variety, but doesn't have good rust resistance. It is in the seed increase phase and will be evaluated for ethanol once sufficient seed is available.

The varieties grown for ethanol so far tend to be soft white spring wheats, originally developed to be grown in the irrigation areas of southern Alberta.

Traditionally, these varieties have been used for making bakery products such as cookies and pastries.

They are suited for ethanol because they yield well and have good starch and protein profiles.

Harpinder Randhawa, a wheat breeder at Agriculture Canada's Lethbridge Research Centre, said soft white spring wheat used to be grown almost exclusively on 30,000 to 40,000 acres in southern Alberta but rising demand from the ethanol industry has changed that.

In 2007, about half a million acres of soft white spring wheat was grown across the Prairies.

Randhawa said AC Andrew is the most popular variety for ethanol but two other soft white spring wheats developed at Lethbridge, Bhishaj and Sadash, may also be suited for ethanol.

Some farmers grew Bhishaj last year and seed is expected to be more readily available this year. Seed supplies for Sadash won't be ready until 2009.

New lines coming

The Lethbridge research centre is working on other lines of soft white spring wheat as well.

Wheat breeders are paying special attention to yield potential, starch content, earlier maturity and disease resistance.

Existing varieties were developed for southern Alberta growing conditions, so they do not have characteristics such as resistance to fusarium headblight or stem rust.

Resistance to these diseases is important if new varieties are to be grown elsewhere on the Prairies.

"Adaptation is becoming a very big issue now because these varieties are being grown all across Western Canada," Randhawa said.

Wheat breeders are learning what makes a wheat variety suitable for ethanol production.

Traits such as high starch and low protein are known to be important but more precise information, such as the particular types of starch that perform well in ethanol plants, isn't available.

A prairie-wide project to evaluate wheat varieties suitable for ethanol production is being conducted by wheat breeder Curtis Pozniak of the Crop Development Centre in Saskatoon in collaboration with the Agriculture Canada's Scott Research Farm and industry partners.

Trials were conducted at seven locations in 2006 and at 21 locations in 2007. More trials will take place in 2008.

"Basically, what we're looking for is high yield coupled with high starch concentrations," Pozniak said.

The varieties evaluated included hard red, red and white prairie spring, soft white spring wheats, triticale and some varieties from the CWGP co-operative test.

Initial results show that soft white spring wheats, on average, yield about 28 percent higher than the hard red spring variety AC Barrie.

Pozniak said there were also some unregistered hard wheats with yields approaching this level.

Work to determine starch and protein levels of the trial varieties will begin in January.

Varieties that have the best potential as an ethanol feedstock will then be evaluated for fermentation potential.

The trials are intended to provide the growing ethanol industry with information on what varieties would be best suited to its needs, and to help farmers select the most appropriate ethanol varieties for their regions.

Beginning this year, some of the data was used in preparing information for the Saskatchewan Seed Guide.

Looking abroad

Pozniak is also excited about plans to test "fully waxy wheat," or wheat with zero percent amylose that has been developed by plant breeder Pierre Hucl at the Crop Development Centre.

Research in the United States has shown that corn with similar properties ferments more quickly and produces higher ethanol yields.

This research, along with the research on fermentation potential, is receiving support from the Western Grains Research Foundation and the Saskatchewan Agriculture Development Fund.

Sherrilyn Phelps, a researcher at the Agriculture Canada research station at Scott, Sask., said farmers choosing a variety for ethanol should look not only at yield potential but at other factors including height, maturity and disease resistance.

Farmers may also need to use different management practices, she said. For example, some varieties that are well suited to ethanol production don't tiller as much as other wheat varieties so farmers may need to adjust their seeding rates.

Phelps said tests so far have shown that varieties from Eastern Canada and Europe aren't suitable for growing in Saskatchewan.

She said feed varieties from Eastern Canada are proving to be too tall, too late and lacking in disease resistance.

European varieties tested so far have also been too late maturing.

"(Farmers) see us testing things but they should be aware they are being tested, not recommended necessarily," she said.

"Even though some varieties are registered in other countries or other areas of Canada, and look really good in terms of yield, they may not be suitable for Saskatchewan conditions. So don't just assume you can bring something in and have success with it."

FILE PHOTO

Canada's livestock feeding sector is expected to benefit from the registration of the low-phytate barley variety, CDC-Lophy I. The hog industry is eagerly awaiting barley varieties that will reduce the amount of phosphorus in hog manure.

Low phytate barley one step closer to Saskatchewan fields

BY PAT REDIGER
Freelance writer

CDC Lophy-I barley has been granted registration by the Canadian Food Inspection Agency.

AFTER FACING SEVERAL challenges, CDC Lophy-I barley is on its way to being commercialized. The low phytate barley, developed by Brian Rossnagel and his team with the Crop Development Centre (CDC) at the University of Saskatchewan, was recently registered by the Canadian Food Inspection Agency's feed section.

In July 2006, the hulless barley variety, then known as HB379, was refused registration by the CFIA, which said the new line had to be categorized as a novel feed.

Unlike most varieties of grain and cereal crops, those classified as a novel feed must go through a series of tests and scientific reviews before being granted registration.

The low phytate barley, specially developed for the livestock feeding industry, offers significant environmental advantages. In February 2006, it received unanimous support from the barley and oat subcommittee of the Prairie Registration Recommending Committee for Grain.

Brian Rossnagel

Rossnagel and other breeders were vocal in their concerns about CFIA's July 2006 decision.

The researcher said it was unjustified and noted that similar barley varieties had already been registered in the United States.

He also noted that phytate levels in the barley should not have constituted grounds for refusal because levels of phytate and phosphorus are not routinely evaluated in Canadian feed.

Rejection of the new variety hindered any further innovations in Canadian crop development, Rossnagel said.

His concerns did not fall on deaf ears. In September 2007, the variety, now known as CDC Lophy-I, was registered by the CFIA.

However, Rossnagel feels the agency has imposed several restrictions that are not appropriate for CDC Lophy-I or barley varieties in general.

Rossnagel is now focussing his efforts on the future of the crop.

"Now that it has been registered, the next step for CDC Lophy-I is commercialization," he said.

FarmPure Seeds, a seed distribution agency from Regina, has been awarded the marketing rights for the variety and is seeking to commercialize it within the boundaries of CFIA's restrictions.

CDC Lophy-I is a hulless barley that provides numerous advantages for several industries.

It is especially beneficial in the swine industry, where barley is largely used for feed.

"Compared to hulled barley, hulless barley decreases the total amount of animal effluent as there is less fibre," said Rossnagel.

That means less manure and fewer environmental concerns.

CDC Lophy-I barley also makes phosphorus in the barley more digestible.

"In CDC Lophy-I barley, three-quarters of the phosphorus is available for digestion, whereas in conventional barley, only one-quarter can be digested by hogs," said Rossnagel. Phosphorus is an essential nutrient that ensures proper growth and bone development in hogs.

CDC Lophy-I provides economic advantages as well.

"Low phytate barley is cost-effective, as less phosphorus additives and enzymes supplements are needed," Rossnagel said.

When using conventional barley, hog farmers normally add phosphorus to ensure proper growth rates and carcass development. That is not necessary with the new variety.

When using regular barley, phytase enzymes may also be required to break down the phytate. Rossnagel said phytase enzymes, often used with conventional barley, are costly and not always effective.

"Although the phytase enzymes have improved, they do not remove the problem," he said. "Low phytate barley reduces the need for enzyme supplementation, lowering costs."

According to Rossnagel, Canadian hog producers are not the only ones that stand to benefit from the development of CDC Lophy-I.

Foreign demand may develop for CDC Lophy-I, especially in countries where hog producers are being blamed for environmental problems.

In Taiwan and Japan, for example, restrictions are placed on the amount of effluent phosphorus that a hog operation can release. The operations face significant penalties if they exceed the regulated amount.

"By using low phytate barley, hog operations can support a greater number of animals while remaining within the standards for effluent phosphorus amounts," said Rossnagel.

Low phytate barley may also find markets outside the hog industry.

The CDC, Agriculture Canada and the Canadian Grain Commission are researching the potential of low phytate barley for improved yeast nutrition during brewing in beer production.

Low phytate barley may also benefit children in the high Andes in Ecuador, where barley is an essential source of dietary energy. Research is underway to determine if low phytate barley will improve iron levels in the children, many of whom suffer from vision problems due to iron deficiency.

Rossnagel and the CDC staff are assisting Hugo Vivar, from Mexico, with his research in this area.

"Dr. Vivar will further his research in the upcoming growing season by using selected low phytate hulless lines that are not susceptible to barley diseases prevalent in the Andes area," Rossnagel said.

The CDC has assisted by providing basic low phytate germplasm and by screening Vivar's breeding selections.

The development of low phytate barley has also led to research with other crops prevalent in hog diets. Rossnagel and his team are encouraging and assisting other crop breeders to develop low phytate peas.

"When combined, low phytate barley and peas should result in reduced phytate pollution in the environment," he said.

Fertilizer prices on the rise

FILE PHOTO

Prairie producers who haven't bought fertilizer yet could be faced with higher prices.

BY STEPHANIE GUETHERT
Freelance writer

Rising global demand blamed for increased nutrient costs.

THE PRICE OF FERTILIZER is on the rise and industry analysts say it's likely to keep rising over the next few months.

"In the fall of 2006, prices moved up 42 percent in the U.S. market," said Brian Kenyon, strategic account manager for Western Canada with Mosaic, a phosphate and potash manufacturer.

"In Western Canada, prices moved up 15 percent and we're going to see prices move up about 30 percent (before January 2008)."

For Saskatchewan farmers, that will mean substantial increases.

"You will see about a $150 per tonne price increase from when you could have it in the fall to prices in the spring of 2008," said Darwyn Boucher, president of Heartland Agro Services Ltd. in Moose Jaw, Sask.

Dean Clarke, owner of Dean Clarke Agri Services in Avonlea, Sask., offered a similar assessment.

"On Dec. 18, 2006, farmers spent about $400 per tonne for phosphate 11-52 and on Nov. 30, 2007, they spent $580 a tonne," he said.

"Urea nitrogen cost $399 a tonne in December 2006 and in November 2007 it cost $500. (So in the fall of) 2006, the same farmer spent about $26.80 per acre on fertilizer. In 2007, farmers spent $35 to $40 an acre."

A number of factors are causing the price to climb.

One of the main reasons is that developing nations are increasing their gross domestic products.

People around the world are getting a bit richer and they want better quality food and the fertilizer to grow it.

According to the Canadian Fertilizer Institute in Ottawa, the demand for fertilizer has risen worldwide, especially in India, China and Brazil.

A brief issued recently by CFI shows that between 2001 and 2006, global nitrogen demand climbed by 14 percent, phosphate demand increased 13 percent and potash demand 10 percent.

Jason Newton, a senior analyst with fertilizing supplies Agrium in Calgary, said internationally, India has been a main contributor to rising demand and higher nutrient prices.

"Indian imports of urea have increased from under 0.2 million tonnes in 2000 to nearly six million tonnes expected in 2007," he said.

Supplies stretched thin

Rhonda Speiss, manager of public relations for the Potash Corporation of Saskatchewan, said rising world demand has stretched supplies thin.

"For most of 2007, customers have had challenges getting products," she said.

"An increased demand and an unchanged supply means that the prices are influenced.

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Potash particularly has gone up more than phosphate and nitrogen because there aren't that many producers and we can't increase the supply very quickly. If the industry could double production overnight, the price would drop."

According to Speiss, there are only three fertilizer manufacturers in Canada that produce potash.

In the world, 12 countries produce potash, 40 produce phosphate and 60 produce nitrogen.

It takes three to seven years to construct a fertilizer manufacturing plant at a cost of $1.5 to $2.5 billion, Speiss added.

In Canada, all three fertilizer manufacturers said they are looking for ways to increase production, but since plants produce fixed amounts each day, they expect supplies to be tight.

FILE PHOTO

With demand rising, farmers are encouraged to secure spring fertilizer supplies as soon as possible.

Many factors at play

The price of natural gas has a huge influence on the price of fertilizer.

"Natural gas is 70 to 80 percent of the cost of nitrogen fertilizer," said Clyde Graham, vice president of strategy and alliances for CFI.

According to Jason Newton of Agrium, natural gas is the main raw material used in the production of ammonia, which is then used either as a nitrogen source on its own, or as the main raw material in the urea.

In 2000, natural gas prices peaked during Hurricane Katrina.

Prices doubled from about $3 to $6 per gigajoule.

Prices doubled again in 2005.

Freight is another key factor affecting nutrient price.

"Ocean freight rates have hit record levels in 2007" said Newton. "Increases in freight costs increase the delivery cost of imported fertilizer."

And the growing ethanol and biodiesel industries are also affecting prices.

According to CFI, the U.S. ethanol industry is expected to double in the coming years.

Since the industry uses corn as its main feedstock, corn prices have increased.

As a result, corn and all grain prices have risen.

"All main commodities are reaching close to record high prices and record crop prices are creating record high demand for all fertilizer products," said Kenyon.

Newton agreed.

"Corn farmers in the U.S. seeded just under 94 million acres of corn in spring 2007, an increase of over 15 million acres," he said.

"Corn is the largest user of nitrogen of the major field crops in North America. Corn uses 3.5 times as much nitrogen fertilizer as soybeans and twice as much nitrogen as wheat."

Plan ahead for fertilizer

A SPECIAL REPORT published by TD Bank Financial Group last November suggests the perfect storm might be brewing to push fertilizer prices to unprecedented levels.

The report states that corn prices in the U.S. jumped from $2 to $4 US per bushel by the end of 2006. It also indicates that ethanol and biodiesel production in Canada is expected to grow quickly due to the federal government mandate to include a five percent ethanol blend in gasoline by 2010 and a two percent biodiesel blend in road diesel and heating oil by 2012.

That could be a mixed blessing for Canadian farmers.

While ethanol and biodiesel production is likely to buoy prices for most crops, it could also mean higher fertilizer costs.

The Canadian Fertilizer Institute in Ottawa says Canadian farmers spend about $2.7 billion a year on fertilizer.

"Canadians are top producers of certain crops and are significant users of fertilizer, but Canadians don't have the world's largest agriculture production," said Clyde Graham, vice president of strategy and alliances for CFI. As a result, Canadians don't set the price of fertilizer in the global market place.

"Canadians are significant exporters of fertilizer," Graham said.

"We are the largest exporter of potash. Supplies go from Saskatchewan to Vancouver, get loaded on to a boat and go directly to the farmer. In China, India and Brazil, farmers are willing to pay the price for fertilizer and the price to get it there."

Farm input retailer Dean Clarke of Dean Clarke Agri Services in Avonlea, Sask., said high fertilizer prices are not likely to affect sales in Saskatchewan.

"I don't think we'll see less sales if the commodities stay up," he said.

According to Clarke, fertilizer prices are typically highest at seeding time. They usually drop in the summer and slowly climb again in the fall. As for the availability of supplies, Clarke and Darwyn Boucher, president of Heartland Agro Services Ltd. in Moose Jaw, say dealers normally do not keep a large inventory on hand.

"The industry may have a spot shortage for an hour or a day," Boucher said. "But I don't anticipate a shortage at my company."

Most reputable dealers believe it's their responsibility to advise their customers about expected price changes before they occur, he added.

"I cannot overemphasize the need to plan, communicate with your retailer and take possession of a reasonable quantity of fertilizer," he said. "One hundred percent of my customers complain about the cost of fertilizer, but farmers are a lot happier today than they were 18 months ago."

Industry experts say farmers can reduce fertilizer costs or amounts through the following strategies:

- grow more pulse crops, which fix their own nitrogen.
- consider manure as a source of crop nutrients.
- conduct soil tests to determine soil needs and correct fertilizer requirements.
- use anhydrous ammonia, which costs a few cents less than other fertilizers.
- implement mid-row or direct seeding strategies.

— GUETHERT

Shoo fly, shoo

BY SHIRLEY BYERS
Freelance writer

Damage caused by the wheat stem sawfly is becoming more prevalent in some parts of the province.

ALTHOUGH, IT'S BEEN perceived primarily as a southern Saskatchewan problem, the wheat stem sawfly has been found as far north as Nipawin, Sask.

While that may come as a surprise to some wheat growers, no one is surprised that the sawfly is expanding its range in Saskatchewan.

"When I went to university 30 years ago, we heard of sawfly but it was traditionally in that Shaunavon-Swift Current country," said Robert Heggie, a pedigreed seed grower from Leross, Sask., about half an hour north of Fort Qu'Appelle.

"They told us that the 'sawfly doesn't move. It doesn't fly. It just doesn't move. Don't worry about it'. "

"I'd like to go talk to my prof again," he added with a chuckle.

Heggie began to see evidence of the wheat stem sawfly in the Leross area two years ago and there were signs of its imminent arrival even before that.

"Three years ago, I said, 'you know it's coming, we should get ahead.' So we planted it even though I didn't need to. We planted solid stemmed wheat so we would have stock for those that did and that worked out well that year."

In 2007, Heggie estimates 20 percent of wheat crops in his area were affected by sawfly damage. Further south in the Lipton-Balcarres area, damage was much worse.

"They had to use lifters on their headers and pickup reels just to be able to get their crop," he said.

"There's maybe 20 percent that (weren't) affected. Eighty percent (were) laying flat."

PHOTOS COURTESY OF AGRICULTURE CANADA

The wheat stem sawfly deposits eggs in the stalks of hollow stemmed wheat varieties. When they hatch, the larvae feed within the stalk, weakening the stem and causing the plant to topple over.

Historically, the first report of sawfly damage in Saskatchewan was in 1895, in a wheat field near Moose Jaw. It achieved pest status in the early years of the 20th century.

A survey, the first of its kind in 40 years, carried out by the federal and provincial agriculture departments from 2003-2005, clearly showed the extent of the latest wheat stem sawfly infestation.

"We showed one, that the problem does exist throughout the wheat growing area, it isn't just a southern problem and two, it does affect large portions of the field, not just the margin," said Scott Hartley, pest management specialist with Saskatchewan Agriculture.

He also noted that maps of earlier attacks show that the area of sawfly infestation has not expanded significantly.

He believes that full field sawfly infestations are at least partly due to the modern farming practices of continuous cropping without soil disturbance, and rotations that grow wheat more frequently, sometimes in consecutive years.

Another factor is prevailing westerly winds that allow sawflies — normally weak flyers — to glide further into fields.

Hartley is hopeful the cycle may be on the downturn.

"I would say from reports that we've had this year … in some areas it's not as bad as it was a year ago. But some of the central parts of Saskatchewan still have some high numbers. It's still variable and it's still a major pest."

Hartley said increased use of solid stem wheats such as Lillian might bring a decline in sawfly populations.

He cited research in Alberta that showed that if a producer grew a solid stem variety two years running on the same field, it could cause a reduction in sawfly numbers.

Another option is to plant a solid stem trap crop around the edges of wheat fields.

Growers using this strategy should plant the solid stem variety at least 20 or 25 metres into the field, Hartley suggested.

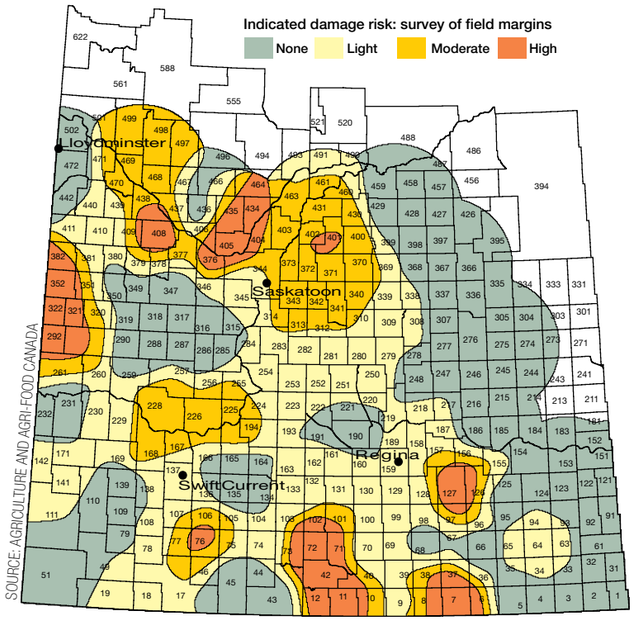
Even with a solid stem variety like Lillian, there can be some cutting, though there will be significantly less than with a hollow stem.

Ron Depauw, a wheat breeder who helped develop AC Lillian, said stem solidity varies depending on the weather. Bright sunshine during the tillering and elongation stage produce the best results.

"There's no such thing as immunity (to sawfly damage)," said Hartley.

"If you're going to look at immunity, you have to look at an altogether different crop. Grow a broadleaf. Grow canola."

Wheat stem sawfly 2005



SOURCE: AGRICULTURE AND AGRI-FOOD CANADA

New wheat variety leads the pack

BY SHIRLEY BYERS
Freelance writer

The Canadian Wheat Board survey suggests solid stemmed Lillian is the most widely grown wheat in Western Canada.

IF A WHEAT COULD stymie the sawfly, that would be good.

If a wheat could stymie the sawfly and outyield other wheat varieties — both solid and hollow stemmed — that would be very good.

If a wheat could stymie the sawfly, outyield other varieties, show respectable protein levels and offer resistance to stripe rust and new races of leaf rust, that would be Lillian, the most popular wheat grown across the prairies last year, according to the 2007 Canadian Wheat Board's variety survey.

Registered in 2003, Lillian became commercially available in 2006. Wheat breeder Ron DePauw, who developed the new variety along with colleagues at Swift Current and Winnipeg, said there were several reasons for its rapid rise to the top.

"In the area where the wheat stem sawfly is so prevalent, in the brown and dark brown soil zones, Lillian is yielding about five percent more than AC Barrie and more than a number of other hollow stemmed varieties," said DePauw.

Compared to earlier sawfly resistant varieties, Lillian has good straw strength and good resistance to disease with the exception of fusarium headblight, he added.

Headblight is generally not a problem in the areas affected by the sawfly.

Good genealogy

Lillian is a descendent of the renowned Marquis, the wheat that is credited with turning Western Canada into the breadbasket of the world.

"It has the good milling and baking properties of Marquis," said DePauw.

"As a matter of fact it has even a little bit better baking performance than Marquis."

At Kerrobert, Sask., pedigreed seed grower, Jud Ambrose said he was pleased with Lillian's performance.

"We didn't think we were sacrificing anything by growing it and it is probably our intention to grow it again," he said.

Gerald Girodat, a seed grower from Shaunavon, Sask., has grown Lillian since it was introduced.

"Lillian is as much as 10 percent higher yielding than Eatonia, (another solid stemmed variety)" he said.

"It yields as well as any other variety of wheat and I think our protein is always a bit higher with the Lillian."

However, Girodat also expressed some concerns that growers should be aware of.

"It's not totally resistant against the sawfly," he said.

"We don't get a total solid stem; it depends a little on weather conditions but it's certainly better than any of the (other) solid stems."

DePauw agreed that like other solid stem wheats, Lillian is resistant but not immune to sawfly damage.

Stem solidity is dependent on the weather, he added.

"The development of the solid stemmed trait is best expressed under conditions of bright sunshine during the tillering and stem elongation stage," he said.

Typically, the stem begins to elongate about five to six weeks after planting.

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FILE PHOTO

Lillian accounted for 14.8 percent of all Canada Western Red Spring wheat acres seeded in Western Canada last year, according to the 2007 Canadian Wheat Board variety survey.

Growers can't control the weather but there are agricultural practices they can use to ensure that the plants get adequate amounts of sunshine to advance stem solidity.

There will be variations depending on where a farm is located but in general, producers should try to seed Lillian at the end of April or early May.

In dry areas such as the brown soil zone, the recommended seeding rate is about a bushel or 60 pounds per acre. In areas that have more moisture, rates could be increased to about a bushel and a half, DePauw said.

"But if you start seeding too thick, then a very heavy seeding rate will contribute to the crop toppling over and then you get interplant shading and the solidness will not develop as well."

Farmers should also fertilize judiciously and use recommended rates of nitrogen.

FILE PHOTO

In Saskatchewan, Lillian production expanded quickly over the past two years. In 2007, it accounted for 19.2 percent of all CWRS acres seeded in the province. The popular solid stemmed wheat was released to commercial producers in 2006.

PHOTO COURTESY OF AGRICULTURE CANADA

Stem solidity in Lillian improves if there is ample sunshine during the tillering and stem elongation stages.Thisphoto shows how larval feces can fill the stalks of a hollow stemmed wheat variety.

Too much nitrogen will promote excessive top growth and interplant shading. Also, because Lillian doesn't have as much straw strength as some other varieties, it is not well suited for irrigation.

Canadian Wheat Board agronomist Mike Grenier said he expected Lillian to increase in popularity. Its 2007 rating in the CWB survey was a bit higher than he anticipated.

It's part of a trend that he thinks will continue.

"We will see new varieties take over the top rankings within the next few years," Grenier said.

"We won't see, as in the past, one dominating variety in the CWR class. We'll see three or four or maybe five or six accounting for half the class."

"I think Lillian will hold steady and maybe increase a little bit," he said.

Other red spring varieties that Grenier is watching include Infinity and CDC Alsask.

A few years down the road, wheat midge resistant varieties such as Goodeve and Unity VB should also have a bright future.

In 2007, about 8,500 farmers filled out the CWB survey, down a little over the last couple of years.

"It's good information for farmers to help them with their variety selection," said Grenier.

"It also helps us (the wheat board) in terms of our marketing plans and as well, plant breeders and seed growers."

The complete survey can be found at www.cwb.ca

Farmers helped finance the development of Lillian through the Western Grains Research Foundation checkoff.

The CWB survey showed it to be most widely grown wheat in Saskatchewan and across the prairie provinces.

Farmers assess conditions for durum potential

BY BRENDA KOSSOWAN
Freelance writer

DRY FIELDS COULD be a limiting factor for Saskatchewan producers hoping to cash in on hot durum markets during the 2008 growing season.

While the shortage of wheat is being felt worldwide, durum supplies have been particularly hard hit.

A number of factors, including searing drought in some regions, poor harvest weather in others and competition from other high-value crops, combined to lift durum prices to record highs by October, 2007.

And those prices show no sign of dropping in the near future, said Bruce Burnett, director of weather and market analysis for the Canadian Wheat Board.

"We've had some quality and production problems around the world that have led to some extreme tightness in the durum market," Burnett said.

"Generally, wheat prices are high because of the tight world situation in wheat, but durum itself is very tight," he continued.

"Because durum is a smaller market with some very positive fundamentals on its own, that's why prices are so high."

In its Pool Return Outlook for November 2007, the wheat board estimated that, after deductions, farmers in central Saskatchewan could expect net payments, on average, of $11 per bushel for top-quality durum.

And that's after freight and other deductions, said Burnett.

By comparison, Alberta canola producers were getting just over $9 per bushel for canola after the 2007 harvest and feed-grade durum was fetching $6 per bu.

Spaghetti central

Canada is the world's top producer of durum, a specialty wheat developed for the pasta and couscous markets.

Canadian farmers typically grow about 60 percent of the world supply.

Most of that production comes from areas of Saskatchewan known for having good weather at harvest time, said Burnett. And that means production levels in Saskatchewan will have a noticeable impact on world markets.

In general, weather conditions in the southeastern and west central areas of Saskatchewan are most favourable to durum production.

Farmers in these regions can usually count on good weather for their fall harvest, said Burnett.

"Our growing area is chiefly the brown and dark brown zones," he said.

"The reason for that is durum is generally suited to the climate, because the end-use quality is determined a lot by the harvest weather."

However, durum quality is never a guarantee.

In 2007, some of Saskatchewan's best durum growing areas experienced extreme heat and dry weather during July.

"It knocked durum yields down substantially from (2006), which was already a below-normal production year," said Burnett.

"Especially in Saskatchewan, south of the No. 1 Highway, that's where most of that drought area was, so that's where you tended to find the lower yields.

"In areas outside of that, you probably had more normal yields."

Some durum producers in Saskatchewan reported yields of 55 bu. per acre last year while Alberta farmers using irrigation reported yields as high as 100 bu. per acre.

The five-year average for Western Canadian durum growers is just over 32 bu. per acre.

Looking ahead

According to Burnett, production forecasts for 2008 remain cautious because soil moisture was badly depleted in the areas where most durum is grown.

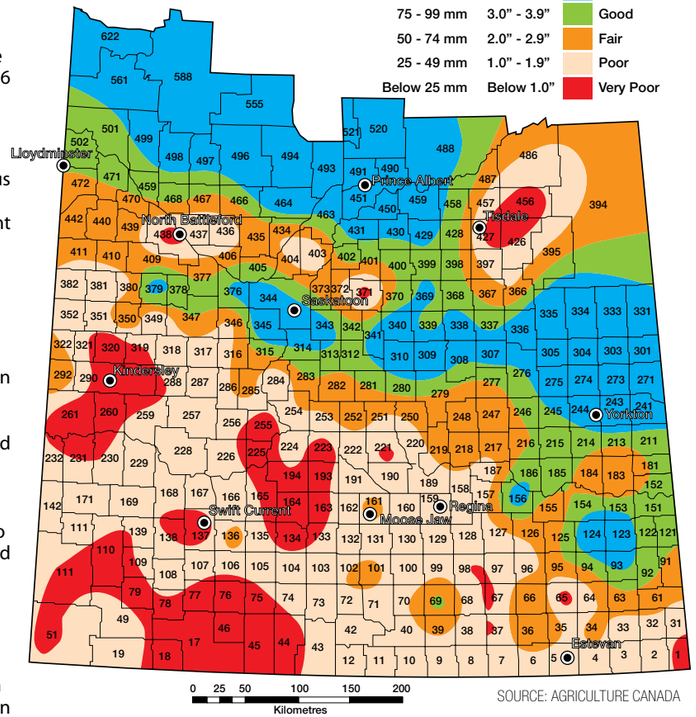
Soil moisture levels in many traditional durum-growing areas were at only 10 percent of capacity going into winter, which leaves farmers with a significant production risk.

"Because we're a substantial part of the world picture, there would be quite a bit riding on what kinds of yield we get," Burnett said.

"We're expecting levels (similar) to the early 2000s, when prices went up the last time," he continued.

"The only thing keeping it from being a large, record area would be competition from other crops, like pulses."

Stubble Subsoil Moisture Map
November 1, 2007



SOURCE: AGRICULTURE CANADA

Burnett believes the strong price for durum has developed independently of the biofuel industry, which has affected the seeding decisions that Saskatchewan farmers are making.

Although Saskatchewan producers have seeded more of their fields to forage and pulse crops in recent years, they are also taking summerfallow out of their annual rotations, so there has not been a substantial reduction in the total amount of land seeded to grain, said Burnett.

Durum's attraction is tightly related to the overall shortfall in global production.

In addition, some farmers in the United States who had grown durum to capitalize on favourable government subsidies are now switching to other crops that are better suited to their growing areas, now that the subsidy program has been terminated, says Burnett.

"In the U.S., their durum area has declined by almost a third from some of the larger years in the early 2000s, and that's mostly competition from other crops."

Burnett said many American durum crops in the past few years were seeded inappropriately by farmers who were working under an government incentive program rather than focusing on production and crop quality.

Saskatchewan farmers interested in fitting durum into their cropping schemes for 2008 will have to weigh the high price against the risk of seeding into dry fields that may not have enough moisture to support the plants, he said.

Individual farmers will need to look at a number of factors, including moisture, yield expectations and harvest season forecasts.

"So it all depends on what area you're in, as to how you view these prices and how positive they are."

Quality first for durum breeders

Quality will always be the first goal for plant breeders developing new durum varieties for Saskatchewan farmers, says a leader in the field.

Plant breeder John Clarke from Agriculture Canada's Semi-Arid Agriculture Research Centre in Swift Current, Sask., has helped to commercialize many popular durum varieties, including a new line still under development.

Breeding objectives include improvement in yield potential, better disease resistance — primarily to leaf spot and fusarium head blight — insect resistance and improvements in processing quality.

Another key objective is reduced cadmium uptake, in response to demands for low-cadmium durum in the European Union.

Cadmium is a heavy metal that occurs naturally in Saskatchewan soils.

Cadmium content in Canadian durum was raised as a trade issue by the European Union about four years ago, said Clarke.

Because North American growers had never been concerned with the amount of cadmium their plants were picking up from the soil, cadmium uptake has only recently become a factor for Canadian plant breeders to consider, he said.

The Swift Current team is now working on a new line, DT773, which shows lower levels of cadmium uptake while meeting other important durum quality goals.

Clarke expects DT773 to be available to farmers for the 2011 growing season.

Curtis Pozniak, a durum wheat specialist with the University of Saskatchewan, had previously developed a line known as DT540, which had good quality and met European standards for cadmium uptake. However, it was not yielding well and was not pursued, said Clarke.

Since 1999, the Swift Current research centre has released four new durum lines. AC Navigator, released in 1999, is grown under identity-preserved contracts and is sold mainly into the United States and Venezuela. It is noted as a strong gluten type with very high yellow pigment in the semolina.

AC Avonlea, released in 2000, has conventional gluten strength, high protein and good colour. However, its acreage has declined since the introduction in 2006 of Strongfield, the most widely grown durum cultivar in 2007.

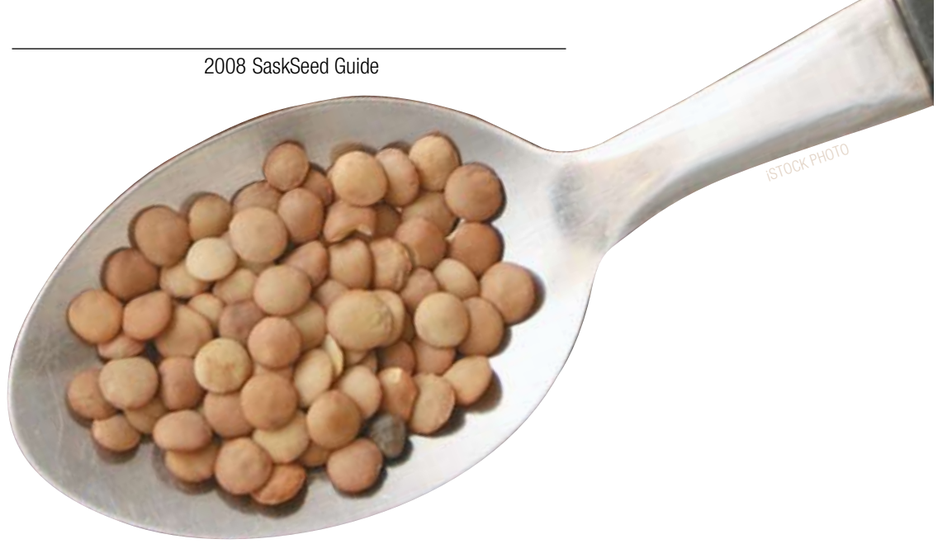
Strongfield yields five to seven percent higher than AC Avonlea and 12 percent higher than Kyle.

It has high protein levels, similar to AC Avonlea, good straw strength and good semolina colour.

Also new in 2006 was Commander, a strong gluten variety with very high yellow pigment in the semolina, a high semolina yield and yield potential that is 12 percent higher than AC Avonlea.

The plant breeding program at Swift Current is funded through farmers' checkoff payments to the Western Grains Research Foundation.

— *KOSSOWAN*



Project could improve disease resistance in lentils

BY SHIRLEY BYERS
Freelance writer

Breeding breakthrough could reduce fungicide use and cut production costs

The honeymoon period between lentils and Saskatchewan pulse growers may be over, but ongoing research by plant breeder Bert Vandenberg should ensure that the two have a long and happy union.

Lentils were first grown in Saskatchewan in 1969 with production taking off in the late 1970s and early '80s.

For the first few years, it was smooth sailing: a marriage made in heaven. But before the '80s were over, ascochyta had begun to rear its blighty head and in the 1990s, anthracnose began to creep in from the eastern part of the Prairies.

"Usually when you start a new crop you can get away with about 10 years of doing pretty well and then all of a sudden, boom! Something finds out how to eat it," said Vandenberg, a pulse crop biologist with the Crop Development Centre in Saskatoon.

Ascochyta and anthracnose reduce lentil yields as well as seed quality and limit the areas in which lentils can be grown.

The diseases can be controlled with fungicides but buying and applying fungicides can have a significant impact on production costs.

And prevalence of the diseases is getting worse. Throughout Western Canada, the intensity and frequency of the diseases is increasing every year.

Vandenberg's latest lentil project is aimed at developing lentil cultivars resistant to both of these diseases using genetic selection.

Work on the project, entitled Integrated Long Term Strategy for Genetic Improvement of Resistance to Ascochyta Blight and Anthracnose in Lentil, was conducted at the University of Saskatchewan over a period of about five years.

"We always need new sources of resistance," Vandenberg said. "Biology is always changing. We have lots of evidence that, for instance, ascochyta will change over time (and) slowly adapt to the current variety … it builds up again."

Vandenberg screened wild varieties of lentils for the genes that were needed to provide resistance.

"We checked out all those species to see whether or not they were resistant to our two diseases and when we found them (the resistance genes), we started to figure out how we could use those genes: how we could transfer them to the lentil that people like to eat."

The project was successful. Vandenberg and his team were able to find and use the genes they were looking for.

He referred to 2007 as the year of really good evidence in the field and the really big breakthrough.

"At the end of this project I can confidently say we have some really good sources of resistance and that over the next five years, we'll see those moved into all the commercial varieties and that should help push down the fungicide bills," he said.

In addition to lowering production costs, the environment will also benefit and stress on the grower will be reduced, he added.

"Farming is stressful enough," Vandenberg said.

"One of the real stressful decisions is 'should I spray or should I not spray? When should I do it?' It sounds simple but when you have 1,000 acres and you're looking at spending $20,000 a day, it's a stressful decision. You can't always say 'I'll just do it anyway.' You'd rather not."

Vandenberg and his team of researchers are already building on findings from the project.

A doctoral student is sorting out the genetics of the resistance that was transferred.

"Once you've identified these genes, it's technically possible to develop them into molecular markers so we don't actually need to put them in the field to do the screening," Vandenberg said.

"We can get a pretty good idea just by extracting some DNA which plants are carrying the genes that we want and then we turn those into our breeding materials. It's a way to do it without having the disease nursery. Sometimes it will be cost effective to do that. That's our ultimate plan."

Vandenberg said that he thinks the project was a good investment for lentil growers.

"Well, if I could say that as a result (of this project), three to four years from now, even if 100,000 acres (aren't) sprayed with some chemical, costing up to 20 bucks an acre, to reduce anthracnose, you're still way ahead," he said.

FILE PHOTO

WHEAT, RYE & TRITICALE

The prairie recommending committee for wheat, rye and triticale evaluates cultivars of wheat, rye and triticale. After new cultivars are evaluated, the committee determines which lines are suitable for registration and makes recommendations to the Canadian Food Inspection Agency's variety registration office.

Wheat

In 2007, the following new lines were recommended for registration.

BW357 — This Canada Western Red Spring (CWRS) wheat offers high yield potential and good sprouting tolerance. In pre-registration testing, it yielded two percent higher than AC Superb and matured one day earlier. It also offers better fusarium headblight tolerance than AC Barrie. The line was developed at Agriculture Canada's Cereal Research Centre in Winnipeg.

BW362 — This Canada Western Red Spring (CWRS) wheat is a high yielding line that offers resistance to the orange wheat blossom midge. In pre-registration testing, it yielded six percent higher than AC Superb and had good preharvest sprouting resistance. The line was developed at Agriculture Canada's Cereal Research Centre in Winnipeg.

BW841 — This Canada Western Red Spring (CWRS) wheat is an orange wheat blossom midge resistant line that offers good yield potential, good straw strength and early maturity. It was developed at Agriculture Canada's Semi-Arid Prairie Agricultural Research Centre in Swift Current, Sask.

ES95 — This Canada Western Extra Strong (CWES) wheat offers resistance to the orange wheat blossom midge. It has good protein potential and early maturity. The line was developed at Agriculture Canada's Cereal Research Centre in Winnipeg.

HY977 — This Canada Prairie Spring Red (CPSR) wheat features high yield potential, good straw strength and early maturity. It was developed by AgriPro Wheat in Morden, Man.

S86-375 — This new wheat line was targeted for registration in the proposed new Canada Western General Purpose (CWGP) wheat class. It is a high yielding, low protein white winter wheat line that yielded 15 percent higher than CDC Falcon in pre-registration testing. The line was developed at University of Saskatchewan Crop Development Centre in Saskatoon.

Triticale

WT004 — In pre-registration testing, this winter triticale line produced yields equivalent to Pika. It features reduced awn expression similar to Bobcat and offers winter hardiness superior to Bobcat. WT004 also has higher biomass yields than Bobcat with improved test weight and kernel weight. It is rated as intermediate for lodging, between Bobcat and Pika. The line was developed at the Field Crop Development Centre in Lacombe, Alta.

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FILE PHOTO

OATS & BARLEY

The prairie recommending committee for oats and barley is responsible for testing and evaluating new lines of barley and oats. After new cultivars are evaluated, the committee determines which lines are suitable for registration and makes recommendations to the Canadian Food Inspection Agency's variety registration office.

Oats

OT2040 — This milling oat performs well in the black soil zone of the Prairies. Crown rust and stem rust reactions suggest that the line offers a good level of resistance to prevalent rust pathotypes in the black soil zone. It has also has good levels of dietary fibre compared to check varieties. OT2040 was developed at Agriculture Canada's Cereal Research Centre in Winnipeg.

In 2007, the following new lines were recommended for registration.

OT3018 — This spring oat offers high yield potential, strong straw and very good grain quality. It is adapted to production outside traditional oat rust areas. The line was developed at the University of Saskatchewan's Crop Development Centre in Saskatoon.

OT903 — Also known as Paul, this spring hulless oat performed well in the black soil zone of Western Canada. It showed resistance to most oat stem rust pathotypes and had fewer hulled kernels, higher protein levels and higher oil content than hulless check varieties. The line was developed at North Dakota State University in Fargo, N.D.

Barley

HB388 — This two-row hulless low-phytate feed barley demonstrates good grain quality and agronomic performance. It features good threshability and resistance to leaf diseases and stem rust. HB388 was developed at the University of Saskatchewan's Crop Development Centre in Saskatoon.

FB012 — This six-row, smooth-awned, forage barley has five percent more average dry matter than Virden. In comparisons with AC Ranger, it displayed similar grain yield and improved kernel test weight. The new line was developed at Agriculture Canada's Brandon Research Centre in Brandon, Man.

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PHOTO BY MICHAEL RAINE

PULSE & SPECIAL CROPS

The prairie recommending committee for pulse and special crops tests and evaluates pulse and special crop cultivars and recommends which lines should be put forth for registration in Western Canada.

Lupins

Arabella — This high yielding, narrow-leaf lupin variety has a dense branching pattern and upright growth habit. Seeds of Arabella have above average protein content and a cream to tan coloured seed coat with dense brown flecks. The new line was developed by Suedwestsaat GbR in Rastatt, Germany.

In 2007, the following new lines were recommended for registration.

Faba beans

NPZ 3-7080 — This high yielding faba bean line offers better lodging resistance and larger seed size than CDC Fatima and CDC Blitz. The line was developed by German-based breeder Norddeutsche Pflanzenzucht Hans-Georg Lembke KG.

Dry Beans

0762 — Also known as Windbreaker, this high yielding pinto bean line has a semi-upright growth habit and maturity similar to Maverick. The line is suitable for production in the Red River Valley of Manitoba. It was developed by Seminis Vegetable Seeds in Filer, Idaho.

97028-11 — This pinto bean line offers high yield potential, early maturity, upright growth habit, superior seed coat colour and resistance to anthracnose race 73, the predominant anthracnose race in Manitoba. 97028-11 is best suited for production in southern Manitoba. It was developed by Agriculture Canada in Morden, Man., and Lethbridge, Alta.

GTS 402 — This white kidney bean is an early maturing line that is adapted to the short season production areas of Manitoba, Ontario and Quebec. It was developed by Gen-Tec Seeds Ltd., of Woodslee, Ont.

L03B754 — This pinto bean line features high yield potential, large seed size and low white mould incidence. It is suitable for production in Alberta and Saskatchewan. The line was developed by Agriculture Canada in Lethbridge, Alta., and Morden, Man.

1073M-38 — Pinto bean line with yield similar to CDC Pintium, large seed size and resistance to race 73 of anthracnose. Developed by the University of Saskatchewan's Crop Development Centre in Saskatoon.

1190M-13 — This navy bean line has high yield potential. It was developed by the University of Saskatchewan's Crop Development Centre in Saskatoon.

1519-10 — Black bean line with high yield potential, early maturity and low incidence of white mould. Developed by the University of Saskatchewan's Crop Development Centre in Saskatoon.

Lentils

2471 — This medium green lentil line is tolerant to imidazolinone herbicides. Yield is 97 percent of CDC Meteor. It was developed by the University of Saskatchewan's Crop Development Centre in Saskatoon.

3110 — This small red lentil line is tolerant to imidazolinone herbicides. Yield is 101 percent of CDC Imperial. It was developed by the University of Saskatchewan's Crop Development Centre in Saskatoon.

3114 — This small red lentil line is tolerant to imidazolinone herbicides. Yield is 104 percent of CDC Impact. The line was developed by the University of Saskatchewan's Crop Development Centre in Saskatoon.

1308M-7 — This small red lentil line offers high seed yield compared to CDC Impact and CDC Redberry. It was developed by the University of Saskatchewan's Crop Development Centre in Saskatoon.

Peas

APCM 9.71.07 — This yellow cotyledon field pea line features high yield potential, early maturity, large seed size and resistance to powdery mildew. It was developed by Agriprogress Inc., in Morden, Man.

Cebeco 4163 — This yellow cotyledon field pea line has high yield potential and resistance to powdery mildew. It was developed by Limagrain Advanta Nederland in Lelystad, Netherlands.

CDC 1400-8 — This yellow cotyledon, semi-leafless field pea line offers high yield potential, early maturity, small seed size, round seed shape, resistance to powdery mildew and lower incidence of fusarium wilt. It was developed by the University of Saskatchewan's Crop Development Centre in Saskatoon.

CDC 1410-15 — This yellow cotyledon, semi-leafless field pea line has high yield potential, early maturity, round seed shape, resistance to powdery mildew and lower incidence of fusarium wilt. It was developed by the University of Saskatchewan's Crop Development Centre in Saskatoon.

CDC 1434-20 — This green cotyledon, semi-leafless field pea line features high yield potential and resistance to powdery mildew. The line's green colour bleaching resistance and green colour intensity are similar to CDC Striker. The line was developed by the University of Saskatchewan's Crop Development Centre in Saskatoon.

MP1833 — This yellow cotyledon field pea line has high yield potential, round seed shape and resistance to powdery mildew. It was developed by Agriculture Canada in Lacombe, Alta.

MP1835 — This green cotyledon field pea line offers high yield potential, early maturity, round seed shape and resistance to powdery mildew. Its green colour bleaching resistance and green colour intensity are similar to CDC Striker. The line was developed by Agriculture Canada in Lacombe, Alta.

MP1838 — This yellow cotyledon field pea line has high yield potential, small seed size, round seed shape and resistance to powdery mildew. It was developed by Agriculture Canada in Lacombe, Alta.

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PHOTO BY MICHAEL RAINE

OILSEEDS

The prairie recommending committee for oilseeds tests and evaluates candidate cultivars of condiment mustard and flax for registration in Canada.

In 2007, the following new lines were recommended for registration.

Linseed flax

FP2188 — This brown-seeded linseed flax line matures significantly earlier than Flanders. Yields are similar to Flanders in the short and longer growing season regions of the black and grey soil zones and under conditions of late seeding. FP2188 offers lodging resistance similar to Flanders and has significantly larger seeds (+0.1 grams), significantly higher oil content (+4.4 percent), significantly higher oil quality (+1.3), and significantly higher protein content in the meal (+3.1 percent). The new line is immune to rust race 371 and has significantly better wilt resistance than the mean of Flanders and Norlin. The line was developed by Agriculture Canada in Morden, Man.

Brown mustard

J01-1352 — This condiment brown mustard line is well adapted to the brown mustard growing areas of Western Canada and offers similar maturity, seed yield, distinct green seed count and chlorophyll content as the check variety, Commercial Brown. J01-1352 has significantly reduced fixed oil, significantly increased protein content and significantly higher volatile oil (allyl isothiocyanate) content than Commercial Brown. It is the first brown mustard line with resistance to white rust (Albugo candida) race 2a. The new line was developed by Agriculture Canada in Saskatoon.

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CANOLA & RAPESEED

The Western Canadian Canola Rapeseed Recommending Committee evaluates lines based on agronomic performance, disease resistance and end-use quality. The table below contains varieties recommended in 2007.

Co-op name	variety	Organization	Herbicide Resistance	Hybrid/ Synthetic	Specialty	check varieties	Yield Avg	Yield SSZ	Yield MSZ	Yield LSZ	Maturity	Blackleg Rating	Blackleg % of Westar	%Oil	%Meal Protein	Height	Lodging
30213-A5		Agriprogress / Lembke	Roundup			46A65, Q2	15	22	16	11	1	MR	43.4	-0.1	-1.0	4	0
30310-A5	93H01 RR	Agriprogress / Lembke	Roundup			46A65, Q2	18	26	21	12	0	MR	42.3	0.1	1.0	7	0
30314-A5		Agriprogress / Lembke	Clearfield			46A65, Q2	17	8	16	19	0	MR	42.3	0.1	-0.1	0	0
30316-A5	SP 761 CL	Agriprogress / Lembke	Clearfield			46A65, Q2	19	2	15	26	2	MR	30.3	0.1	-0.4	6	0
30321-A5	1651 H	Agriprogress / Lembke	Clearfield			46A65, Q2	20	18	21	18	0	R	28.5	-0.2	-0.1	6	0
30326-A5	1768S	Agriprogress / Lembke	Roundup	S		46A65, Q2	15	21	20	8	0	MR	41.2	-0.2	0.0	6	0
30516-A5	83S01 RR	Agriprogress / Lembke	Roundup			46A65, Q2	17	17	19	14	-2	MR	45.3	-0.7	-1.0	6	0
30608-A5	RUGBY	Agriprogress / Lembke	Roundup			46A65, Q2	6	-2	9	10	0	R	18.8	0.8	0.7	1	0
04RHY/268		Bayer Cropscience	Liberty	H		46A65, Q2	21	18	21	24	-4	MR	40.4	0.1	-0.7	-1	0
05RHY/029		Bayer Cropscience	Liberty	H		46A65, Q2	30	23	32	33	-2	R	28.4	0.0	-0.6	7	0
05RHY/918		Bayer Cropscience	Liberty	H	Low linolenic	46A65, Q2	21	18	24	21	2	R	28.3	1.3	-0.3	2	0
05RHY/959		Bayer Cropscience	Liberty	H	Low linolenic	46A65, Q2	30	31	28	34	1	R	26.4	1.6	-1.4	-1	0
05RHY/961		Bayer Cropscience	Liberty	H	Low linolenic	46A65, Q2	20	14	22	19	-2	MR	37.3	0.9	-0.4	3	0
05RHY/966		Bayer Cropscience	Liberty	H		46A65, Q2	20	22	21	18	2	R	26.6	1.5	-0.6	1	0
PHS05-816		Bayer Cropscience	Liberty	H		46A65, Q2	33	30	34	35	0	R	20.2	-0.6	-1.1	10	1
PHS05-817		Bayer Cropscience	Liberty	H		46A65, Q2	29	26	30	32	-2	MR	30.6	0.2	-1.2	3	0
BCS309L		Bonis & Co. Ltd	Liberty			46A65, Q2	7		9	3	1	MR	38.9	0.1	1.3	3	0
BCS314L	84S01 LL	Bonis & Co. Ltd	Liberty			46A65, Q2	7		8	5	-1	MR	45.0	-0.2	1.7	0	0
04H277	v2018	Cargill Specialty Canola Oils	Roundup	H	Low linolenic	46A65, Q2	16		16	16	0	MR	35.8	0.6	0.6	3	0
04H339		Cargill Specialty Canola Oils	Roundup	H	Low linolenic	46A65, Q2	11	10	12	8	0	R	23.8	2.4	0.1	1	0
04H416		Cargill Specialty Canola Oils	Roundup	H	Low linolenic	46A65, Q2	16	11	16	19	1	MR	30.1	0.3	-0.3	10	0
04H730		Cargill Specialty Canola Oils	Roundup	H	Low linolenic	46A65, Q2	12	7	11	14	0	MR	32.5	0.5	0.4	9	0
05H975		Cargill Specialty Canola Oils	Roundup	H	Low linolenic	46A65, Q2	14	11	17	13	-1	R	28.8	0.7	0.2	8	0
DN040241		Dow Agrosciences	Clearfield		Low linolenic	46A65, Q2	-4	-10	-6	-2	3	MR	31.7	0.0	1.6	1	0
DN040244	Nex 840 CL	Dow Agrosciences	Clearfield		Low linolenic	46A65, Q2	-2	-7	-5	3	1	MR	40.7	0.2	1.4	-3	0
DN040844	Nex 842 CL	Dow Agrosciences	Clearfield		Low linolenic	46A65, Q2	-4	-13	-8	1	3	MR	38.4	1.5	2.1	-1	0
DN040845	Nex 845 CL	Dow Agrosciences	Clearfield		Low linolenic	46A65, Q2	4	-2	1	8	3	MR	40.2	0.9	1.2	-1	0
DN040856		Dow Agrosciences	Clearfield		Low linolenic	46A65, Q2	-5	-14	-4	-4	4	MR	33.0	0.7	0.6	0	0
1267_03		Dsv Canada Inc.	Roundup			46A65, Q2	4	4	5	3	-1	MR	41.2	0.2	1.4	1	0
22008		Dsv Canada Inc.	Liberty			46A65, Q2	5	8	7	-2	-1	MR	42.0	-0.7	-0.3	2	0
3430_03		Dsv Canada Inc.	Clearfield			46A65, Q2	11	20	6	10	0	MR	42.6	0.1	-0.2	2	0
H5025		Dsv Canada Inc.	RT73/Gt73			46A65, Q2	6	8	8	3	2	MR	37.4	0.2	1.7	10	0
D3038		Monsanto Canada	Clearfield			46A65, Q2	14	9	17		-2	R	18.4	1.0	1.2	0	0
D3074		Monsanto Canada	Clearfield			46A65, Q2	15	12	18		0	R	13.9	-0.9	0.4	4	0
D3271	71-30 CL	Monsanto Canada	Clearfield			46A65, Q2	16	10	19		-2	R	11.8	-0.2	0.3	5	0
D3329		Monsanto Canada	Clearfield			46A65, Q2	17	16	20	13	-1	R	19.0	2.2	0.8	3	0
MB41036		Monsanto Canada	Roundup			46A65, Q2	-10	-12	-11	-6	-3	MR	38.8	0.4	0.6	1	0
MB52105		Monsanto Canada	Roundup			46A65, Q2	10		13	2	-3	MR	35.3	1.0	0.7	-6	0
MB52129		Monsanto Canada.	Roundup			46A65, Q2	7		11	-3	-1	R	18.4	0.9	1.6	-1	0
MB52136		Monsanto Canada	Roundup			46A65, Q2	6		10	-1	-3	R	21.7	0.0	1.0	-5	0
MB52162		Monsanto Canada	Roundup			46A65, Q2	7	10	8	6	-1	R	27.8	-0.7	0.5	-4	0
Z4446		Monsanto Canada	Roundup			46A65, Q2	16	16	14	21	-3	MR	32.3	1.6	0.2	-6	0
03N047R	43H57	Pioneer Hi-Bred Ltd	Roundup	H	Early napus	43A56 AND 44A04	7	7			-2	MR	31.8	-0.4	0.6	1	
05N166R		Pioneer Hi-Bred Ltd	Roundup	H		46A65, Q2	15	16	16	10	-2	MR	36.5	-0.6	0.5	3	0
05N171R		Pioneer Hi-Bred Ltd	Roundup	H		46A65, Q2	13	16	11	11	2	R	26.4	0.4	1.2	7	0
05N172R		Pioneer Hi-Bred Ltd	Roundup	H		46A65, Q2	15	16	16	9	0	MR	36.0	1.4	-0.1	2	0
05N207R		Pioneer Hi-Bred Ltd	Roundup	H		46A65, Q2	19	21	18	18	1	R	15.5	1.7	1.5	4	0
05N212R		Pioneer Hi-Bred Ltd	Roundup	H	Low linolenic	46A65, Q2	13	14	13	10	1	R	21.2	1.5	-0.4	2	0
NR02-05659		Sask. Wheat Pool	Roundup			46A65, Q2	3		4	1	0	MR	33.4	2.1	0.9	-3	0
NR04-02720		Sask. Wheat Pool	Roundup			46A65, Q2	4		3	3	0	R	27.3	-0.4	1.9	6	0
NR04-04867		Sask. Wheat Pool	Roundup			46A65, Q2	-2		1	-12	6	R	23.1	2.5	0.4	3	0
SW-PG 02-10471		Sask. Wheat Pool	Roundup			46A65, Q2	15		18	5	0	MR	34.8	0.2	-0.8	3	0
SW-PI H02-0474		Sask. Wheat Pool	Roundup			46A65, Q2	12		14	6	-2	MR	33.3	-0.7	0.6	2	0
SW-PJ H02-0492		Sask. Wheat Pool	Roundup			46A65, Q2	10		13	3	0	MR	34.2	-0.1	1.5	4	0
SW J5311 RR		SW Seed Ltd	Roundup			46A65, Q2	6	2	10	1	-1	R	28.6	0.5	0.3	-1	0
SW J5312 RR		SW Seed Ltd	Roundup			46A65, Q2	8	12	9	1	0	MR	32.1	0.0	-0.6	3	0
SW J8001 RR	73P01 RR	SW Seed Ltd	Roundup			46A65, Q2	2	2	3	-3	1	R	19.8	2.2	0.1	3	0
A05-17NI	72P01 CL	University Of Alberta	Clearfield			46A65, Q2	7	3	5	9	-1	MR	31.6	-0.2	0.1	-1	0
A05-6NI		University Of Alberta	Clearfield			46A65, Q2	8	12	8	4	-3	MR	46.7	1.2	-0.7	-4	0

CANADIAN FOOD INSPECTION AGENCY REGISTRATION REPORT

The list below contains information on new crop varieties registered by the Canadian Food Inspection Agency between Nov. 1, 2006 and Nov. 1, 2007. The varieties listed below were recommended for registration by the Prairie Grain Development Committee and the Western Canada Canola/Rapeseed Recommending Committee.

Barley, two-row spring

Alston — Received national registration Feb. 19, 2007.
Breeder: W.G. Thompson & Sons, Ailsa Craig, Ont.
Canadian distributor: Proven Seed (Viterra).

Selkirk — Received national registration Feb. 23, 2007.
Breeder: Hyland Seeds, W.G. Thompson & Sons, Blenheim, Ont.
Canadian distributor: Agricore United (Viterra).

CDC Mindon — Received national registration Feb. 23, 2007.
Breeder: Crop Development Centre, University of Saskatchewan, Saskatoon.
Canadian distributor: Secan Association.

Champion — Received national registration Jan. 26, 2007.
Breeder: Westbred LLC, Bozeman, Montana.
Canadian distributor: Agricore United (Viterra).

Conrad — Received national registration March 12, 2007.
Breeder: Busch Agricultural Resources Inc., U.S.A.
Canadian distributor: Busch Agricultural Resources Inc., Canada.

Enduro — Received national registration Jan. 26, 2007.
Breeder: Westbred LLC, Bozeman, Montana.
Canadian distributor: Agricore United (Viterra).

Barley, two-row spring hulless

CDC Lophy-1 — Received national registration Sept 18, 2007.
Breeder: Crop Development Centre, University of Saskatchewan, Saskatoon.
Canadian distributor: FarmPure Seeds Inc.

Beans, pea (navy) type

GTS 546 — Received national registration May 14, 2007.
Breeder: Gen-Tec Seeds Ltd., Woodslee, Ont.
Canadian distributor: Gen-Tec Seeds Ltd.

Beans, pinto type

Winmor — Received national registration July 26, 2007.
Breeder: Agriculture Canada, Morden, Man.
Canadian distributor: Agricore United Bean Business Unit (Viterra).

Canarygrass, annual

CDC Bastia — Received national registration April 13, 2007.
Breeder: Crop Development Centre, University of Saskatchewan, Saskatoon.
Canadian distributor: University of Saskatchewan.

Canola, Brassica napus

1141 (Hybrid) — Received national registration Oct. 24, 2007.
Breeder: Bayer Crop Science Inc.
Canadian distributor: Bayer Crop Science Inc., Saskatoon.

1143 (Hybrid) — Received national registration Oct. 24, 2007.
Breeder: Bayer Crop Science Inc.
Canadian distributor: Bayer Crop Science Inc., Saskatoon.

1651H (Hybrid) — Received national registration May 25, 2007.
Breeder: Norddeutsche Pflanzenzucht, Germany.
Canadian distributor: Canterra Seeds.

1759S — Received national registration Nov. 27, 2006.
Breeder: Svalof Weibull A.B., Sweden.
Canadian distributor: SW Seed Ltd.

1768S — Received national registration April 30, 2007.
Breeder: Norddeutsche Pflanzenzucht, Germany.
Canadian distributor: Canterra Seeds.

1847V — Received national registration Aug. 14, 2007.
Breeder: Svalof Weibull A.B., Sweden.
Canadian distributor: SW Seed Ltd.

1855H (Hybrid) — Received national registration May 14, 2007.
Breeder: Svalof Weibull A.B., Sweden.
Canadian representative: SW Seed Ltd.

4362RR (Hybrid) — Received national registration Nov. 27, 2006.
Breeder: DSV Canada Inc., Winnipeg.
Canadian distributor: Brett-Young Seeds Ltd.

43H57 (Hybrid) — Received national registration April 20, 2007.
Breeder: Pioneer Hi-Bred Production Ltd., Caledon, Ont.
Canadian distributor: Pioneer Hi-Bred Production Ltd.

4414R (Hybrid) — Received national registration Nov. 27, 2006.
Breeder: DSV Canada Inc., Winnipeg.
Canadian distributor: Brett-Young Seeds Ltd.

5440 (Hybrid) — Received national registration April 30, 2007.
Breeder: Bayer Cropscience Co., Canada..
Canadian distributor: Bayer Cropscience Co.

5843 CL — Received national registration Nov. 27, 2006.
Breeder: DSV Canada Inc., Winnipeg.
Canadian distributor: Brett-Young Seeds Ltd.

71-30CL (Hybrid) — Received national registration Aug. 14, 2007.
Breeder: Monsanto Canada Inc., Listowel, Ont.
Canadian distributor: Monsanto Canada Inc.

72P01 CL — Received national registration Aug. 14, 2007.
Breeder: University of Alberta.
Canadian distributor: FarmPure Seeds Inc.

73P01 RR — Received national registration May 14, 2007.
Breeder: Agriculture Canada, Sainte Foy, Que.
Canadian distributor: SW Seed Ltd.

83S01 RR — Received national registration Aug. 14, 2007.
Breeder: Norddeutsche Pflanzenzucht, Germany.
Canadian distributor: FarmPure Seeds Inc.

8440 (Hybrid) — Received national registration April 30, 2007.
Breeder: Bayer Cropscience Co., Canada..
Canadian distributor: Bayer Cropscience Co.

84S00 LL — Received national registration Jan. 30, 2007.
Breeder: University of Guelph, Guelph, Ont.
Canadian distributor: Bonis and Co. Ltd.

84S01 LL — Received national registration Aug. 25, 2007.
Breeder: University of Guelph, Guelph, Ont.
Canadian distributor: Bonis and Co. Ltd.

93H01 (Hybrid) — Received national registration Aug. 14, 2007.
Breeder: Norddeutsche Pflanzenzucht, Germany.
Canadian distributor: FarmPure Seeds Inc.

997 RR — Received national registration Nov. 27, 2006.
Breeder: DSV Canada Inc., Winnipeg.
Canadian distributor: Brett-Young Seeds Ltd.

MB4 1001 — Received national registration April 10, 2007.
Breeder: Monsanto Canada Inc., Listowel, Ont.
Canadian distributor: Monsanto Canada Inc., Listowel, Ont.

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MB4 1007 — Received national registration April 10, 2007.
Breeder: Monsanto Canada Inc., Listowel, Ont.
Canadian distributor: Monsanto Canada Inc., Listowel, Ont.

Nex840 CL — Received national registration March 20, 2007.
Breeder: Dow Agrosciences Canada Inc.
Canadian distributor: Dow Agrosciences Canada Inc.

Nex842 CL — Received national registration March 20, 2007.
Breeder: Dow Agrosciences Canada Inc.
Canadian distributor: Dow Agrosciences Canada Inc.

Nex845 CL — Received national registration March 20, 2007.
Breeder: Dow Agrosciences Canada Inc.
Canadian distributor: Dow Agrosciences Canada Inc.

Rugby — Received national registration May 14, 2007.
Breeder: Norddeutsche Pflanzenzucht, Germany.
Canadian distributor: Secan Association.

SP621 RR (Hybrid) — Received national registration Nov. 27, 2006.
Breeder: Saskatchewan Wheat Pool, Saskatoon.
Canadian distributor: Saskatchewan Wheat Pool (Viterra).

SP761 CL (Hybrid) — Received national registration June 27, 2007.
Breeder: Norddeutsche Pflanzenzucht, Germany.
Canadian distributor: Saskatchewan Wheat Pool (Viterra).

SP Favourable RR — Received national registration Nov. 27, 2006.
Breeder: Saskatchewan Wheat Pool, Saskatoon.
Canadian distributor: Saskatchewan Wheat Pool (Viterra).

SP Force CL — Received national registration Nov. 27, 2006.
Breeder: Saskatchewan Wheat Pool, Saskatoon.
Canadian distributor: Saskatchewan Wheat Pool (Viterra).

V2010 (Hybrid) — Received national registration April 24, 2007.
Breeder: Cargill Specialty Canola Oils , Camrose, Alta.
Canadian distributor: Cargill Ltd.

V2018 (Hybrid) — Received national registration Aug. 14, 2007.
Breeder: Cargill Specialty Canola Oils , Camrose, Alta.
Canadian distributor: Cargill Ltd.

Flax, oilseed

Prairie Grande — Received national registration June 27, 2007.
Breeder: Agriculture Canada, Morden, Man.
Canadian distributor: Secan Association.

Lentil

CDC Greenland — Received national registration Jan. 29, 2007.
Breeder: Crop Development Centre, University of Saskatchewan, Saskatoon.
Canadian distributor: Saskatchewan Pulse Growers.

CDC Improve — Received national registration Jan. 29, 2007.
Breeder: Crop Development Centre, University of Saskatchewan, Saskatoon.
Canadian distributor: Saskatchewan Pulse Growers.

Lupin

Arabella — Received national registration Oct. 22, 2007.
Breeder: Suedwestsaat GBR, Germany.
Canadian distributor: FarmPure Seeds Inc..

Oats, spring

7600M — Received national registration Nov. 30, 2006.
Breeder: Proven Seed, Saskatoon.
Canadian distributor: Proven Seed (Viterra).

CDC Profi — Received national registration Feb. 23, 2007.
Breeder: Crop Development Centre, University of Saskatchewan, Saskatoon.
Canadian distributor: FarmPure Seeds Inc.

Tractor — Received national registration April 4, 2007.
Breeder: Svalof Weibull A.B., Sweden.
Canadian distributor: SW Seed Ltd.

Pea, field, yellow

CDC Centennial — Received national registration Feb. 23, 2007.
Breeder: Crop Development Centre, University of Saskatchewan, Saskatoon.
Canadian distributor: Saskatchewan Pulse Growers.

Sorento — Received national registration June 27, 2007.
Breeder: Advanta Seeds BV, Netherlands.
Canadian distributor: FarmPure Seeds Inc.

Rye, winter

Dakota — Received national registration Dec. 19, 2006.
Breeder: Agricore Co-operative Ltd.
Canadian distributor: Agricore United (Viterra).

Wheat, spelt

CDC Zorba — Received regional registration April 13, 2007.
Breeder: Crop Development Centre, University of Saskatchewan, Saskatoon.
Canadian distributor: University of Saskatchewan.
Terms & Conditions: Contact distributor for conditions of registration.

Wheat, spring

Alvena — Received regional registration Nov. 10, 2006.
Breeder: Agriculture Canada, Swift Current, Sask.
Canadian distributor: Agriculture Canada, Seed Increase Unit, Indian Head, Sask.
Terms & Conditions: Registration includes British Columbia, Alberta, Saskatchewan, Manitoba, Nova Scotia, New Brunswick, Newfoundland and Prince Edward Island.

CDC Abound — Received regional registration May 10, 2007.
Breeder: Crop Development Centre, University of Saskatchewan, Saskatoon.
Canadian distributor: University of Saskatchewan.
Terms & Conditions: Contact distributor for conditions of registration.

Goodeve — Received regional registration Oct. 22, 2007.
Breeder: Agriculture Canada, Swift Current, Sask.
Canadian distributor: FarmPure Seeds Inc.
Terms & Conditions: Contact distributor for conditions of registration.

Sadash — Received regional registration Aug. 13, 2007.
Breeder: Agriculture Canada, Lethbridge, Alta.
Canadian distributor: Secan Association.
Terms & Conditions: Contact distributor for conditions of registration.

Snowstar — Received interim regional registration from May 15, 2007 to May 15, 2009.
Breeder: Agriculture Canada, Winnipeg.
Canadian distributor: Secan Association.
Terms & Conditions: Contact distributor for conditions of registration.

Unity — Received regional registration Aug. 24, 2007.
Breeder: Agriculture Canada, Cereal Research Centre, Winnipeg.
Canadian distributor: Secan Association.
Terms & Conditions: Contact distributor for conditions of registration.

Waskada — Received regional registration Aug. 14, 2007.
Breeder: Agriculture Canada, Cereal Research Centre, Winnipeg.
Canadian distributor: Secan Association.
Terms & Conditions: Contact distributor for conditions of registration.

Wheat, winter

Carnaval — Received regional registration April 4, 2007.
Breeder: Hyland Seeds, W.G. Thompson & Sons, Blenheim, Ont.
Canadian distributor: Semico Inc.
Terms & Conditions: Contact distributor for conditions of registration.

Ptarmigan — Received regional registration July 24, 2007.
Breeder: University of Saskatchewan, Saskatoon.
Canadian distributor: Mercer Seeds.
Terms & Conditions: Contact distributor for conditions of registration.

The publishers of this list made reasonable efforts to ensure its accuracy but will not be held responsible for omissions.

FILE PHOTO

Mustard growers in Western Canada are anticipating an increase in contract prices for 2008.

Good things in store for mustard producers

BY PAT REDIGER
Freelance writer

SASKATCHEWAN MUSTARD production could get a boost over the next few years with the development of new mustard varieties.

Don Rode, senior field manager at the Agriculture Canada oilseed breeding program in Saskatoon, said producers and buyers can expect varieties with improved seed quality, larger seed size and higher yields through improved resistance to disease.

The new lines will be tailored for specific end users and should help to ensure larger profits for Saskatchewan mustard producers.

According to Rode, new Agriculture Canada mustard varieties will offer improved mucilage and protein content.

Breeders will also focus on lowering fixed oil content, reducing green seed and altering the "hot principle," or glucosinolate content, to accommodate different end users.

"New mustard varieties will … provide advantages for producers through increased yield and genetic diversity of mustard," Rode said.

"These innovations should help to provide a consistent supply of high quality Canadian mustard seed into global markets."

New lines of mustard are assessed in multi-location variety registration trials conducted for the Prairie Grain Development Committee, Rode said.

In recent years, three non GM mustard varieties have been developed by Agriculture Canada for production in Saskatchewan.

They are the yellow mustard, Andante, and two brown mustards, J01-1352 and Centennial Brown.

Andante was registered in 2002. Breeder seed was produced in 2002 and certified seed supplies were available in 2004. Rode said Andante has improved protein and seed mucilage content and a higher thousand-seed weight than older varieties.

"It has similar yield, maturity, height, glucosinolate content and disease reaction compared to AC Pennant," he said.

The new brown variety, J01-1352, has disease resistance to the white rust race 2a. The variety also features reduced fix oil and increased hot principle (allyl glucosinolate) and protein content.

Breeder seed was produced in 2007 and the application for full registration is in progress.

Centennial Brown, also known as J97-149, is a brown mustard registered in March 2006. Developed by Agriculture Canada scientists in Saskatoon, it is the second pedigreed brown mustard registered in Canada.

"Centennial Brown has improved seed quality and good yield," Rode said. "The fixed oil content of the variety is reduced, while protein content, seed weight and the allyl glucosinolate are increased compared to the variety registration check, Commercial Brown."

The disease reactions of Centennial Brown are similar to those of Commercial Brown and Duchess.

It si resistant to blackleg and susceptible to white rust.

Certified seed supplies of Centennial Brown should be available for planting in 2008.

Although estimated mustard production for 2008 will be not be known until January, some analysts say contract production prices could be as much as 20 percent higher than last year.

Brett Meinert, a mustard producer from Shaunavon, Sask., said buyers usually establish contract production prices in January.

"Last spring, contract production prices for yellow mustard were 23-25 cents per pound," he said.

"Since buyers will want to encourage greater production next year, there should be substantially higher production contract prices for yellow mustard, slightly higher for brown, and nearly neutral prices for oriental mustards compared to last year."

In the 2007 growing season, many mustard producers in Saskatchewan had low yields due to bad weather.

In southwestern Saskatchewan, unusually hot and dry conditions in July reduced the yields considerably.

In central Saskatchewan, producers contended with rain during harvest, although Meinert said mustard quality was probably not affected significantly. On his farm, Meinert had yields about one-third below normal.

Statistics from Saskatchewan Agriculture suggested that Saskatchewan mustard production decreased slightly between 2006 and 2007.

In 2007, about 350,000 acres were seeded, 335,000 acres were harvested and total production was roughly 81,700 tonnes, down one per cent from 2006. The average yield was 538 pounds per acre.

In 2006, about 268,200 acres were seeded, 260,000 acres were harvested, and total production was roughly 82,600 tonnes. Average yields in 2006 were roughly 700 lbs. per acre.

According to Meinert, recent increases in mustard prices reflect lower yields and the overall decrease in mustard production in the last growing season.

"The current spot price of 40 cents is quite high," he said.

"Until a couple of years ago, I considered the price at which I would sell uncommitted stocks to be 18 cents."

The increase from 18 to 40 cents is a sign of reduced mustard supplies throughout the world.

Although members of the mustard industry often guard the secrets of their inventory position, Meinert offered his own take on the current trend in mustard prices for the upcoming growing season. "As I see it, buyers and manufacturers were stung quite badly a few years ago when yellow mustard prices hit 72 cents per pound for a few weeks. They now tend to maintain larger inventories as a hedge against price swings," he said.

Millhouse barley gets green light

PHOTOS COURTESY OF FARMPURE SEEDS

Millhousebarleyproduceswhitecolouredflourthatblendswellandincreasesthefibre in baked goods.

BY STEPHANIE GUETHERT
Freelance writer

Flour from the new barley variety is generating interest among bakers and food makers.

A NEW VARIETY of barley is boldly going where no barley has gone before.

Millhouse is the first barley variety developed for baking purposes.

And if it lives up to expectations, it could soon be appearing in a variety of baked food items including breads, muffins, scones and noodles.

"Millhouse is special because it's a milling barley," said Mario Therrien, an Agriculture Canada research scientist who bred the new variety.

"The quality of the grain is such that it goes through a mill, like wheat, makes flour and gets blended with wheat flour."

There are dietary advantages to adding Millhouse to wheat flour.

"Millhouse has four grams of dietary fibre to every 100 grams of flour," Therrien said.

"White wheat flour has approximately one gram."

Flour from Millhouse also contains about 10 times more antioxidants than wheat flour.

Germination levels could be reduced if care is not taken during harvest.

To gain these health benefits, bakers should use at least 20 percent Millhouse in their flour blends.

"You can have up to 70 percent Millhouse in extruded noodles," said Therrien.

"Scones can be made of 100 percent Millhouse."

Tests at Agriculture Canada and the Canadian International Grains Institute in Winnipeg suggest the new barley adds a pleasant flavour to baked goods.

Bread baked with 40 percent barley flour and 60 percent wheat flour tastes like rye bread, but is lighter-looking and less chewy in texture than rye bread.

Blended wheat flour that contains 20 percent Millhouse produces loaves that are similar to those baked with 100 percent wheat flour.

That's because Millhouse produces a very white flour, that stays white after baking.

"Regular barley is grey looking," Therrien said. "We bred that colour out of Millhouse."

Studies at CIGI also showed that Millhouse can extend the shelf-life of baked goods.

"After Day 4, Millhouse stays fresher tasting because of the moisture-holding factor of barley," said Therrien.

Similar field traits

A hulless barley variety, Millhouse requires the same seeding and growing care as other common barley varieties but harvest practices must be altered slightly.

"To harvest Millhouse for seed, you have to be very gentle on the harvest to make sure the germ stays intact," Therrien said.

"For food, you have to use a setting closer to soft white wheat."

At the flour mill, Millhouse is a bit harder to mill than wheat but yields almost the same amount of flour.

Therrien began breeding Millhouse barley in 1996 and 10 years later, the Canadian Food Inspection Agency registered it for commercial production in Canada.

FarmPure Seeds of Regina, Sask., obtained the licensing rights to propagate certified seed and market it to seed growers.

"We've had calls (about Millhouse) from Japan and the U.S.," said Trenton Baisley, chief executive of FarmPure Seeds.

"If the (Canadian) wheat board has a program, we should have some seed for commercial production by the beginning of next year (2009)."

Andrea Hilderman, manager of the identity preserved and food barley program at the Canadian Wheat Board, said the board is developing a market for Millhouse and other hulless barley varieties.

"We're providing companies with a lot of information to encourage interest," she said.

According to Hilderman, cereal makers, soup manufacturers and bakers who want to make their products healthier have expressed interest in Millhouse at CIGI promotion programs.

Hilderman said it will likely take two years or more to develop a market.

"The future does look bright for hulless barley, if these companies push the product into their new product development area," she said.

Funding for the development of Millhouse barley was provided by the Western Grains Research Foundation.

The non-profit organization manages an endowment fund and the wheat and barley check-off funds that contribute $4 to $5 million annually to cereal breeding research.

The wheat and barley checkoff is a mandatory levy that the WGRF collects from wheat and barley sales across Western Canada.

The checkoffs amount to less than one cent per bushel on wheat and roughly one cent per bushel on barley.

More than 55 varieties of wheat and 25 varieties of barley exist today due to funding received through the WGRF checkoff.

"We believe it's important to keep wheat and barley breeding in the public sector because it gives farmers control to buy the products they want," said Amanda Soulodre, communications manager with the WGRF.

Coriander spices up rotations

Coriander is a small acreage crop in Saskatchewan but returns can be substantial. The crop can be used as a whole spice or ground into a powder that is used to flavour meat, baked goods and many other foods.

BY SHIRLEY BYERS
Freelance writer

The little-known crop can be a money maker but growers should be wary of production pitfalls and volatile markets.

Martha Stewart sprinkled it into the stuffing for her Thanksgiving turkey.

Others use it to flavour curries, liqueurs and gin.

As a whole spice or ground into a powder, coriander enhances the flavour of meats, liquors, baked goods, pickles, candies, sauces and soups.

And the crop, though small in acreage, is gradually becoming a mainstay among Saskatchewan's specialty crop farmers.

According to statistics from Saskatchewan Agriculture, average coriander acreage in Saskatchewan over the past 10 years is approximately 17,000 acres.

Clifford Calcutt, a pedigreed seed grower from the Lemberg, Sask., area, harvested a quarter section of coriander in 2007.

At the time, limited world supplies had pushed the price from 20 cents a pound to nearly 45 cents between July and November. Coriander yields in the Lemberg area were estimated in the 1,000 to 1,200 pounds per acre range.

"It's a very low input crop. If the land is in good shape it doesn't require any fertilizer," said Bob Pfeifer, another Lemberg, area pedigreed seed grower who grows coriander.

Pfeifer also likes the crop because it works well in his rotation.

But not every year is a good one for coriander production. As with most small acreage crops, prices fluctuate and yields are variable.

In 2004, for example, an early August frost shrunk yields to about 50 lb. per acre in the Lemberg area and revenues were disappointing.

Slow to start

Coriander typically takes three to five weeks to emerge and it doesn't compete well with weeds.

Pfeifer applies glyphosate in the fall and again before the crop emerges.

There are also other herbicides registered for use in coriander to control annual grassy and broadleaf weeds.

Asters yellow can be a common problem.

In the dozen years he has been growing coriander, Pfeifer said asters yellow has never been severe enough to significantly affect yields but it shows up every year.

There's also a fusarium flower blight that will attack if conditions are right.

"You'll see black patches starting in the fields, maybe two feet in diameter and within a few days it will grow to wipe out a large portion of the field," he said.

The blight thrives in moist, humid and foggy mornings.

Quadris foliar fungicide can be used to control the disease.

Coriander is also susceptible to sooty mould and sclerotinia. Damping off and root rot can be issues, but for Pfeifer the major issue, especially with small seed varieties, is frost.

Coriander is available in small and large seed sizes. Saskatchewan producers north of Highway 10 connecting Yorton, Melville and Regina should choose large seed varieties that mature faster, Pfeifer said.

Suzanne and Autumn are two such varieties.

Calcutt and Pfeifer grow CDC Major, a variety developed at the University of Saskatchewan.

Major is classified as a medium large and has proven popular with buyers.

"We have buyers overseas specifying that's the variety they want," Pfeifer said.

Pfeifer's company, Lenmar Seed Farm Inc., works with several brokers in markets around the world.

"We don't do any purchasing, we just do the sourcing and the processing," he said.

Unique concerns

The fruit of the coriander plant consists of two joined hemispheric seeds. Processing involves splitting and cleaning the seeds.

Many farmers use these splits for seed stock. If the germination levels are adequate, each half of the split should grow, providing a cheap seed source.

However, plating whole seeds produces a higher quality crop.

Germination should always be tested, Pfeifer added.

"Last year we had some in the 80s and almost into the 90s percentage… and some this year is coming back between eight and 16 percent. Always do a germination test," he said.

Some Saskatchewan coriander sells into the U.S. but most goes overseas in containers.

"Size and colour is what the buyers look at so most of the sales are made on the basis of samples," Pfeifer said.

For more information on coriander production in Saskatchewan, visit the Saskatchewan Agriculture website at http://www.agriculture.gov.sk.ca/ and type coriander in the search box.

FILE PHOTO

Summerfallow acreage could reach all-time low in 2008

BY DARLENE POLACHIC
Freelance writer

New cropping practices, economics could result in largest seeded acreage in the province's history

SUMMERFALLOW ACRES are likely to reach an all-time low in Saskatchewan this year as the province's farmers try to capitalize on high commodity prices and solid demand for grain and oilseeds.

According to Statistics Canada data from the March 2007 seeding intentions survey, Saskatchewan farmers were expected to leave about 5.8 million acres idle during the 2007 growing season.

By last June, however, seeded acreage had exceeded Statistics Canada estimates and total summerfallow acreage was pegged at just 5.3 million acres, down significantly from the 7.85 million acres left fallow in 2006.

In 2008, most analysts predict the downward trend will continue, with summerfallow acres reaching an all-time low in the province.

Rising grain prices and high demand from the biofuel sector are cited as key factors influencing prairie farmers' cropping decisions.

But Dale Risula, an agrologist with the Agriculture Knowledge Centre in Regina, says economics are not the only reason summerfallow acres are decreasing.

A marked shift in farming methods is also allowing farmers to make cropping decisions that may not have been possible in the past.

"Since the 1990s, farmers have been moving away from conventional seeding systems to practices that are more effective in moisture conservation," Risula said.

"Tillage disrupts moisture. It opens up the soil and allows moisture to evaporate. Farmers are realizing that by cutting down on tillage, they are retaining so much moisture in the soil that they can get longer rotations before the land needs rest."

According to Risula, there are no set rules or recommended schedules for resting farmland.

"Farmers are often able to achieve continuous rotations for a number of years," he said.

"Where they used to summerfallow every second or third year, now they may choose to put summerfallow into their rotation every fifth, sixth or even seventh year."

"Different crops take moisture from different depths in the soil," he added.

"If you pay attention to that, you can plan your crop rotation to manage the moisture levels at the various depths."

According to Risula, alternating shallow and deep rooted crops enables farmers to maximize yields and make optimal use of soil moisture reserves.

Shallow-rooted crops like pulses, lentils and field peas can be alternated with deep-rooted crops like wheat, oats and canola.

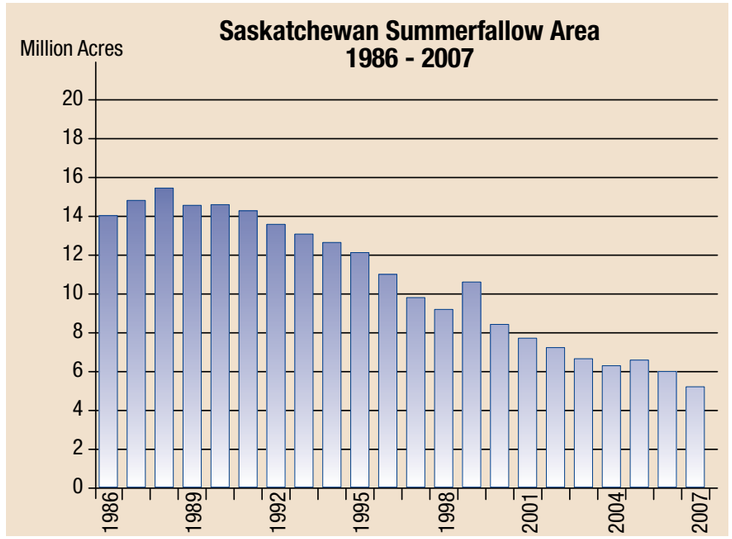
Other crops such as flax draw moisture from an intermediate depth, Risula said.

"So one crop can be tapping into one particular moisture level, while the soil effectively replenishes moisture at the untapped levels."

Risula said fewer acres each year are devoted to summerfallow because more farmers use continuous cropping strategies.

As well, farm machinery manufacturers are developing equipment that caters to these practices.

"Farmers buying new equipment would be hard pressed to find anything else."



SOURCE: SASKATCHEWAN AGRICULTURE, STATISTICS CANADA

Saskatchewan

	2006 Seeded Area '000 Acres	2007 Seeded Area '000 Acres	Percent Change
Winter Wheat	236.8	430.0	81.6
Spring Wheat	9,575.0	7,485.0	-22.0
Durum	3,224.0	4,050.0	25.6
Oats	2,316.0	2,800.0	20.9
Barley	3,522.5	4,400.0	24.9
Fall Rye	214.2	110.0	-48.6
Flax*	1,544.0	1,075.0	-30.4
Canola	5,977.3	7,150.0	19.6
Mixed Grains	150.8	40.0	-73.5
Sub Total	**26,762.8**	**27,540.0**	**2.9**
Mustard	268.2	350.0	30.5
Sunflower Seed	n/a	n/a	n/a
Lentils	1,275.0	1,335.0	4.6
Dry Peas	2,430.5	2,925.0	20.3
Canary Seed	326.2	425.0	30.3
Triticale	65.3	80.0	22.6
Chickpeas	287.2	380.0	36.6
Total	**31,406.9**	**33,035.0**	**5.2**
Summerfallow	6,001.3	5,300.0	-11.7

*excludes solin

Canada

	2006 Seeded Area '000 Acres	2007 Seeded Area '000 Acres	Percent Change
Winter Wheat	1,711.0	1,674.7	-2.1
Spring Wheat	18,743.0	15,211.0	-18.8
Durum	3,795.4	4,815.0	26.9
Oats	5,099.1	5,391.4	5.7
Barley	9,118.0	10,862.8	19.1
Fall Rye	482.0	295.0	-38.8
Flax*	1,988.8	1,305.0	-34.4
Canola	12,422.5	14,586.1	17.4
Mixed Grains	829.7	412.3	-50.3
Sub Total	**54,189.5**	**54,533.3**	**0.7**
Mustard	330.70	435.0	31.5
Sunflower Seed	190.2	190.0	-0.1
Lentils	1,275.8	1,335.0	4.6
Dry Peas	3,115.5	3,630.0	16.5
Canary Seed	335.2	445.0	32.8
Triticale	141.6	120.0	-15.3
Chickpeas	318.9	430.0	34.8
Total	**59,897.4**	**61,138.3**	**2.1**
Summerfallow	8,616.9	7,650.0	-11.2

SOURCE: SASKATCHEWAN AGRICULTURE, STATISTICS CANADA

Clearfield lentils gain ground in Saskatchewan

FILE PHOTO

Supplies of Clearfield lentil varieties CDC Impact and CDC Imperial should be plentiful this year. Quantities of CDC Improve, a large green variety, will be limited

BY DARLENE POLACHIC
Freelance writer

Positive reviews are rolling in for herbicide tolerant lentil varieties.

CANADIAN FARMERS began growing lentils in 1969 and within a few years they had emerged as one the world's top producers, along with Turkey and Australia.

Nearly four decades later, the release of the first herbicide-tolerant Clearfield lentil varieties could help to ensure that Canadian producers maintain their top ranking.

Scott Chapman, Clearfield brand manager for the German-based BASF, said farmers have waited years for the release of Clearfield lentils.

And so far, the results look good.

"The process produces crops that are tolerant to imidazolinone herbicides, to which they would not normally be tolerant," Chapman said.

"With our Clearfield lentil production system … less herbicide is applied than on conventional lentils. This delivers better weed control and less crop injury, which results in higher yields."

Clearfield lentil varieties are tolerant to the BASF herbicides Odyssey and Odyssey DLX, and the newly registered Solo.

Developing a reputation

Herbicide-tolerant lentils were developed through a joint venture involving BASF, the Saskatchewan Pulse Growers and the University of Sasaktchewan Crop Development Centre.

BASF provided the technical funding and support and is responsible for long-term stewardship of the technology. The Crop Development Centre was responsible for varietal development and the Pulse Growers manage the distribution of seed through the Variety Release Program.

The technology used to develop the varieties did not involve genetic modification, meaning the varieties can be exported globally.

Walter Fast of Fast Seed Farm near Glidden, Sask., grew Clearfield lentil varieties CDC Impact, CDC Imperial, CDC 3110, and the new large green lentil CDC Improve.

Last year he sowed a quarter section of each and was very pleased with the overall performance.

They performed so well, in fact, that Fast won first prize in the lentil category, as well as the overall aggregate prize, at the 2007 Canadian Western Agribition.

"In terms of yield, Impact went 33 bushels per acre, and Imperial went 34 to 35 bu. per acre," Fast said.

"This is somewhat higher than other lentil varieties, but the big difference is the clean fields that the Clearfield system has given us."

In southeastern Saskatchewan, Allen Altwasser of Super Seed Farm at Yellowgrass also had positive reviews.

He said CDC Impact stood up well in 2007.

"We got about 26 bu. per acre, which was better than the Robin Red lentil variety we've also grown," he said.

"Impact stood up better, too, and was not so short to the ground. We had good moisture in June, but July was really hot and dry. CDC Impact seemed to handle the heat well."

Positive feedback

Albert Lutzer of Lutzer-Latrace Seed Farms near Lumsden, Sask., has grown both CDC Impact and CDC Imperial.

"Both performed very well here. Impact yielded around 33 bu. per acre," he said. "We found it easy to grow and easy to harvest."

Another CDC Impact grower is Garry Mayerle, who farms near Tisdale in the northeast grainbelt.

"This is not lentil growing area," Mayerle said.

"But CDC Impact performed very well despite the fact that we had wet seeding conditions and rain after seeding. We got 23 bu. per acre from Impact, which is a good average for our area."

David Dutton of Dutton Farms near Paynton, Sask., in the northwest corner of the grainbelt, grew CDC Imperial lentils last year.

He said he was happy with the yield of about 1,600 pounds per acre.

Chapman said there is a good supply of Clearfield lentil seed available from seed growers, but demand is high.

Supplies of the new Clearfield line, CDC Improve, are also available from select seed growers, but quantities are very limited. CDC Improve was recently released through the SPG's variety release program.

Research contributes to summerfallow decline

THE PRACTICE OF summerfallowing in Saskatchewan dates back to the late 1800s, shortly after commercial grain production took root in the province.

In 1885, the apparent value of allowing the soil to lie idle for a year was discovered by accident when the Qu'Appelle Valley Farming Company near Indian Head, Sask., had its horses and wagons commandeered to carry military supplies to the Northwest Resistance near the present-day site of Duck Lake, Sask.

With no means of planting a crop, the land was left fallow. The following spring, farm managers were surprised to note that the soil on this fallow land had more moisture than usual, and that it produced a larger than normal yield.

As a result, in 1889, the Indian Head Experimental Farm advised that "fallowing the land is the best preparation to ensure a crop."

In subsequent years, the practice was widely adopted, and farmers across the province adopted a rotation that saw half of their land left fallow and the other half in crop.

Farmers who seeded the same land in consecutive years noticed a drop in yield. Thus, summerfallow was promoted as a sound agricultural practice on the Prairies until the 1960s.

Gradually, however, research turned the tables.

Summerfallow and repeated tillage were shown to contribute to environmental damage. Exposing the soil increases the risk of wind and water erosion and the loss of organic matter, all of which contributes to production of carbon dioxide, a greenhouse gas.

Further study showed that the drop in production in the second year of continuous cropping was only temporary and that after a few years, yields returned to earlier levels.

At one time, seeded acreage and summerfallow in Saskatchewan covered roughly the same area.

Today, however, the ratio is roughly seven to one, and summerfallow acreage is decreasing every year.

Annual figures collected by Saskatchewan Agriculture between 1986 and 2007 show that the highest fallow acreage in Saskatchewan over the past 22 years occurred in 1988 when more than 15 million acres were left fallow.

Since then, the number has steadily declined until, in 2007, all but 5.3 million acres were seeded.

Each year, Statistics Canada collects data from six surveys it conducts throughout the year.

"We interview farmers by telephone, asking the number of acres they have in major crops and in summerfallow," said David Burroughs, the head of crop reporting for Statistics Canada.

"We don't forecast; we can only make estimates according to the data given."

Burroughs said the first survey, which is done in March, is called intentions.

"Farmers tell us what they are intending to seed. By the time we do the next survey in May, they are in the field, and the summerfallow numbers have generally changed," he said.

— POLACHIC

FILE PHOTO

Bloat-safe alfalfa under development in Western Canada

BY PAT REDIGER
Freelance writer

Next generation alfalfa varieties could set a new standard for livestock forages.

THE DEVELOPMENT OF an innovative form of bloat-safe alfalfa is underway in Western Canada.

Agriculture Canada research centres in Saskatoon and Lethbridge are working together with Wisconsin-based Forage Genetics International to develop alfalfa that is proanthocyanidin-rich.

"Proanthocyanidin-enhanced alfalfa forage, called tannin alfalfa, will render alfalfa completely bloat-safe," said Margaret Gruber, an Agriculture Canada research scientist and plant molecular biologist.

"With tannin alfalfa, producers will be able to take full advantage of alfalfa and eliminate other protein feed sources."

Proanthocyanidins, also known as tannins, are naturally occurring and edible substances found in the majority of plants.

"They are a natural defence for plants to guard against insect damage and larger herbivores," said Gruber.

In alfalfa, proanthocyanidins are located in the seed coat. Agriculture Canada and Forage Genetics International are working to develop a variety of alfalfa where proanthocyanidins are also present in alfalfa forage.

If successful, the result will be a bloat-safe alfalfa with improved digestibility for cattle.

As well as being bloat-safe, tannin alfalfa will have other beneficial traits.

Gruber said the new alfalfa would improve animal health by reducing the parasite load in livestock intestines. It will also allow for higher protein bypass, enabling more of the plant protein to be converted by the livestock into animal protein.

"Tannin alfalfa will also reduce the amount of greenhouse gas emissions produced by animals who feed on rich, nutritious forage. It will also reduce alfalfa silage spoilage by inhibiting spoiling microbes," she said.

The economic advantages of bloat-safe tannin alfalfa could be significant.

It is estimated that proanthocyanidin-rich alfalfa will reduce costs to the Canadian dairy and beef industry by $2 billion each year.

Limited options

Currently, AC Grazeland is the only type of alfalfa in Western Canada that addresses the problem of bloat in livestock.

AC Grazeland is a bloat-reduced variety that has been registered in Canada for almost a decade.

Bruce Coulman, head of the department of plant sciences at the University of Saskatchewan and an expert in forage breeding, said the variety reduces bloat by approximately 60 percent.

"AC Grazeland has performed well, with no problems reported," said Coulman.

"It is seeded in mixtures with grasses, a combination which further reduces the risk of bloating."

The current use of bloat-reduced alfalfa and, moreover, the development of bloat-safe alfalfa is significant because alfalfa is an irreplaceable feed source for livestock.

"Alfalfa is the most nutritious animal protein feed known world-wide. It is easily digested and has a high protein content," said Gruber.

With bloat-reduced and bloat-safe alfalfa, producers can utilize alfalfa to its maximum potential without the risk of harming their livestock.

In addition to bloat-safe alfalfa, other alfalfa types are currently being developed with potential benefits for livestock.

Genetically modified low-lignin alfalfa, developed by Forage Genetics International and soon to be registered in the United States, is another promising alfalfa type.

Low-lignin alfalfa has a reduced amount of lignin, a substance required for a rigid cell wall.

With a modified cell wall, the cellulose contained inside alfalfa forage cells is more accessible.

"Available cellulose is a great source of stored sugars that can be used by livestock for energy production. Low-lignin alfalfa in livestock diets will meet energy requirements more efficiently and reduce feed costs," said Gruber.

"Low-lignin alfalfa will also be able to be used more efficiently as a source of cellulosic sugars for bioethanol production."

Bloat-safe tannin alfalfa and genetically modified low-lignin alfalfa will both result in significant gains for the livestock industry.

"The future outlook of these two new types of alfalfa are promising on their own and even more so when developed together," said Gruber.

"Both proanthocyanidin-enhanced alfalfa and low-lignin alfalfa will be fully adopted as a long time industry standard for high forage quality livestock feed and forage."

Saskatchewan Pedigreed Seed Growers

Directory of Crop Varieties

This list was prepared by the Canadian Seed Growers Association. It includes varieties eligible for sale in Canada and seed crops issued certificates as of Nov. 1, 2007. CSGA assumes no responsibility for errors or omissions.
The pedigreed class code is listed after the grower's phone number. S = Select; F = Foundation; R = Registered; C = Certified.

BARLEY

AC METCALFE

Ardell, Terrence Wade, Michael, Brad & Joanne	Vanscoy	306-668-4415		R	C
Bailey, Roy G.	Milden	306-935-4702	F		C
Berscheid, K.N. & B. & E.K. & S. & C. & Y.	Lake Lenore	306-368-2602		R	
Beuker, Wilbur A.	Melfort	306-863-2225		R	C
Biese, Jerry	Swift Current	306-773-7027		R	
Bolt, Dale & Scott & Tod	Wynyard	306-554-2076		R	
Booy, Jerry N. & Murray T. & Darcy K.	Glaslyn	306-342-2058		R	C
Boyd, Clare W. & Dale A.	Melfort	306-752-2108			C
Buziak, Ronald Charles	Mayfair	306-445-6556			C
Calcutt, Garry M.	Lemberg	306-335-2760			C
Carlson, Herbert E.P. & Leslie	Buchanan	306-592-4449		R	C
Chapple, Floyd & Debbie	Grandora	306-329-4697		R	
Charabin, Dale Kenneth & Timothy V. & Ryan	North Battleford	306-445-2939		R	
Clancy, Kenneth	Carrot River	306-768-2902		R	
Dangstorp, Emil & Brian	Redvers	306-452-3444			C
Dell, Dennis & Bonnie A.	Dafoe	306-554-3117			C
Duclos, Roger	Admiral	306-785-4625			C
Edmunds, Greg & Glen	Tisdale	306-873-5480			C
Edwards, Lawrence R., Donna, Jeff & Mike	Nokomis	306-528-2140			C
Ennis, Garnet & Burton & Neil	Glenavon	306-429-2793		R	
Fast, Walter J. & Linda	Kindersley	306-463-3626			C
Fedoruk, Michael J.	Kamsack	306-542-4235			C
Floberg, Barry & Delana & Devin & Brandon	Shaunavon	306-297-2087		R	
Fraser, Scott & Shawn	Pambrun	306-582-2148			C
Fritzler, Baine A., Brenda D. & Adam A.	Govan	306-484-4612		R	C
Gellner, Clayton S.	Southey	306-726-4323			C
Girodat, Gerald	Shaunavon	306-297-2913			C
Hardy, Brian & Calvin	Grenfell	306-697-3127			C
Heavin, G. Harvey & G. Ryan	Melfort	306-752-4171		R	
Heggie, Robert Thomas	Leross	306-675-4920			C
Herle, Raymond & Gregory R.	Wilkie	306-843-2934		R	C
Herndier, Don O.	Lemberg	306-335-2763			C
Hyland, Thomas Francis	Scott	306-247-2086			C
Jones, Bradley	Wadena	306-338-2381			C
Junop, Leonard	Delisle	306-493-2572			C
Kaeding, Roger W. & Warren	Churchbridge	306-896-2236		R	
Kasko, F. John	Prince Albert	306-764-2875		R	
Kirkham, Daniel Grant & Fran & R.	Saltcoats	306-744-2542		R	C
Labrecque, Roger & Claude	Saskatoon	306-373-9379			C
Larsen, Lyle L.	Aylsham	306-862-7333			C
Laxdal, G.M.; Blyth, D., Gregory, Wayne & Richard & Bolt, Glen A.	Wynyard	306-554-2078		R	C
Lepp, Milton & Elden; & Neufeld, M.	Hepburn	306-254-4243			C
Lung Seeds Ltd.	Lake Lenore	306-368-2414		R	C
Lutzer, Albert & Latrace, Jim	Lumsden	306-731-2843			C
Mannle, Kenneth & Laurie	Moosomin	306-435-3411			C
Marcotte, Raymond W.	Kinistino	306-864-3654		R	C
Mayerle, Erwin D.	Tisdale	306-873-4261			C
Maze, Gary K.	Unity	306-398-2637			C
Medernach, Louis J. & Kim L.	Cudworth	306-256-3398			C
Meyer, Ward	Lake Lenore	306-368-2635			C
Neville, Patrick, Luke & Andrew	Govan	306-484-4560		R	
Novak, Orrin	Kuroki	306-338-2021		F	C
Novak, Roy	Wadena	306-338-2607			C
Nystuen, David G.	Spalding	306-872-2014		R	C
Olson, Lyndon Ordon	Archerwill	306-323-4912		R	
Osborne, Nolan Stanley C.	Yorkton	306-782-7113			C
Ostafie, Dave & Robert	Canora	306-563-6244		R	
Otsig, Kevin Bradley	Watson	306-287-4133	S	F	C
Pastl, Glenn A.	Watson	306-287-4243		R	C
Patzer, Wendell Albert	Frontier	306-296-4780			C
Peterson, S.P., Daniel & Gordon	Wynyard	306-554-3396			C
Pratchler, John & L. & M. & A.	Muenster	306-682-3317			C
Reavie, Robert Dixon	Arborfield	306-769-8887			C
Reisner, Cecil & Barry	Limerick	306-263-2139	S	F	C
Rempel, Blair Allan	Nipawin	306-862-3573		R	
Rogg, Paul A.	Pennant	306-626-3236			C
Rude, Stanley	Naicam	306-874-2359			C
Rugg, Barry C. & Robert B.	Elstow	306-257-3638		R	
Sandercock, Eric M.	Balcarres	306-334-2958			C
Sanderson, Donald Stewart	Rosetown	306-882-3317	S		
Schumacher, Mark	Delisle	306-493-2937			C
Seidle, E. & B. & C. & M.	Medstead	306-342-4377	S	F	R C
Shewchuk, Stan & Lorne & Terry	Krydor	306-497-2800			C
Shoemaker, Norman	Mossbank	306-354-2570			C
Shwaga, Jeff W.	Wroxton	306-742-4590			C
Slind, Donald Edward	Archerwill	306-323-4927		R	
Sopatyk, Jeffery & Patti	Saskatoon	306-955-2516		R	
South, Winston & Richard & Bradley	Melfort	306-752-9840		R	
Sperle, Bentley D. & Jody	Unity	306-228-3160		F	C
Stauber, Clayton & Lori	Stewart Valley	306-773-7907		R	
Stirton, Brian James	Moose Jaw	306-693-2310			C
Stokke, Terry J. & Shane T.	Watrous	306-946-2566			C
Tebbutt, Ronald E. & Gregg	Nipawin	306-862-9730		R	
Tomtene, Terry, Steven & Slind, Daniel	Birch Hills	306-749-3230	S		C
Trawin, Julie Ann	Melfort	306-752-4060		F	R
Trowell, Bert & Kenneth & Larry	Saltcoats	306-744-2687	S	F	C
Wakefield, Monica & Laurie Garland	Maidstone	306-893-2984	S		R C
Warrington, John	Mervin	306-845-2642			C
Wartman, Murray E.	Aylsham	306-862-5000			C
Weightman, Brian	Rosthern	306-232-5588			C
Wiens, Rudy G.	Herschel	306-377-4800			C
Wilfing, Raymond John & Ryan John	Meadow Lake	306-236-6811			C
Winterhalt, Tim	Unity	306-228-3170			C
Wittig, Donald O.	Watson	306-287-3915			C
Wood, Leonard David	Wynyard	306-554-2932			C
Woroschuk, Andrew	Calder	306-742-4682			C
Youzwa, Donald	Nipawin	306-862-5690		R	

AC RANGER

Ardell, Terrence Wade, Michael, Brad & Joanne	Vanscoy	306-668-4415			C
Bailey, Roy G.	Milden	306-935-4702		R	
Cay, Randy D.	Kinistino	306-864-3696			C
Wartman, Murray E.	Aylsham	306-862-5000		F	

AC ROSSER

Boldt, Garry	Osler	306-239-2071			C
Edmunds, Greg & Glen	Tisdale	306-873-5480		R	
Hetland, Bill	Naicam	306-874-5694	S	F	R
Kennett, Brian Guy	Manor	306-448-4813			C
Redman, Wayne G. & Collin M.	Margo	306-324-4235			C
Silversides, Roy P. & Ruby N.	Corning	306-457-2639		R	C
Weightman, Brian	Rosthern	306-232-5588			C

BINSCARTH					
Kaeding, Roger W. & Warren	Churchbridge	306-896-2236			C
CALDER					
Berscheid, K.N. & B. & E.K. & S. & C. & Y.	Lake Lenore	306-368-2602		F	
Medernach, Louis J. & Kim L.	Cudworth	306-256-3398			C
CDC AURORA NIJO					
Viterra	Regina	306-569-4082		F	
CDC BATTLEFORD					
Rude, Stanley	Naicam	306-874-2359		F	C
CDC COALITION					
Girodat, Gerald	Shaunavon	306-297-2913	S		
Kaeding, Roger W. & Warren	Churchbridge	306-896-2236		F	
Pfeifer, Robert G.	Lemberg	306-335-2532		F	
South, Winston & Richard & Bradley	Melfort	306-752-9840		F	
CDC COPELAND					
Ardell, Terrence Wade, Michael, Brad & Joanne	Vanscoy	306-668-4415			C
Baxter, Daniel J.H.	North Battleford	306-445-5414		R	
Berscheid, K.N. & B. & E.K. & S. & C. & Y.	Lake Lenore	306-368-2602		R	
Bley, Bradley	Annaheim	306-366-4903			C
Boldt, Garry	Osler	306-239-2071			C
Bolt, Dale & Scott & Tod	Wynyard	306-554-2076			C
Booy, Jerry N. & Murray T. & Darcy K.	Glaslyn	306-342-2058			C
Boyd, Clare W. & Dale A.	Melfort	306-752-2108	S		C
Brigden, Allan D., Drew & Devon	Kisbey	306-462-4813			C
Buziak, Carl	Mayfair	306-445-9862			C
Buziak, Ronald Charles	Mayfair	306-445-6556			C
Carlson, Herbert E.P. & Leslie	Buchanan	306-592-4449		R	C
Craswell, Raymond W.	Strasbourg	306-725-3236			C
Denis, Michel P. & Marc	St. Denis	306-258-2075		R	
Dutton, David H. & George	Paynton	306-895-4306			C
Edmunds, Greg & Glen	Tisdale	306-873-5480		R	
Edwards, Lawrence R., Donna, Jeff & Mike	Nokomis	306-528-2140		R	
Eyolfson, Robert H.	Leslie	306-272-4624			C
Fast, Walter J. & Linda	Kindersley	306-463-3626		R	
Fedoruk, Leah	Kamsack	306-542-3645		R	
Fedoruk, Rod M. & Cathy	Kamsack	306-542-4235			C
Floberg, Barry & Delana & Devin & Brandon	Shaunavon	306-297-2087			C
Fritzler, Baine A., Brenda D. & Adam A.	Govan	306-484-4612		R	
Geall, Brian R.	Nipawin	306-862-9177		R	
Gellner, Clayton S.	Southey	306-726-4323			C
Girodat, Gerald	Shaunavon	306-297-2913		R	
Greenshields, Grant & Jim & Callie	Semans	306-524-2155			C
Gregoire, Denis	North Battleford	306-445-5516		R	C
Heavin, Larry N. & L. Warren	Melfort	306-752-4020	S	F	C
Heggie, Kyle Robert	Leross	306-675-4920			C
Hleck, Lloyd G.	Codette	306-862-5966		R	
Hyland, Thomas Francis	Scott	306-247-2086		R	
Hyndman, David	Balcarres	306-334-2914		R	
Junop, Leonard	Delisle	306-493-2572			C
Kemper, Kenneth W. & Armella	Humboldt	306-682-3570			C
Kemper, Russell & Donna	Fulda	306-682-4929			C
Kennett, Brian Guy	Manor	306-448-4813			C
Labrecque, Roger & Claude	Saskatoon	306-373-9379			C
Latrace, Bill	Caronport	306-693-2626		R	
Laxdal, G.M.; Blyth, D., Gregory, Wayne & Richard & Bolt, Glen A.	Wynyard	306-554-2078	S	R	
Lepp, Milton & Elden; & Neufeld, M.	Hepburn	306-254-4243		R	C
Luck, Lorne C. & Landis	Tisdale	306-873-4111		R	
Lung Seeds Ltd.	Lake Lenore	306-368-2414			C
Lutzer, Albert & Latrace, Jim	Lumsden	306-731-2843		R	

Maze, Gary K.	Unity	306-398-2637			R	
McCarthy, Richard J. & Brent	Corning	306-224-4848			R	
Medernach, Louis J. & Kim L.	Cudworth	306-256-3398				C
Nakonechny, Peter, Don P., Joyce, Coral & Lance	Ruthilda	306-932-4409		F		
Nell, Robin William	Francis	306-957-4236			R	
Novak, Orrin	Kuroki	306-338-2021				C
Novak, Roy	Wadena	306-338-2607			R	
Nystuen, David G.	Spalding	306-872-2014	S	F		C
Olson, Lyndon Ordon	Archerwill	306-323-4912	S	F		C
Osborne, Nolan Stanley C.	Yorkton	306-782-7113				C
Ostafie, Dave & Robert	Canora	306-563-6244		F		
Otsig, Kevin Bradley	Watson	306-287-4133			R	C
Pratchler, John & L. & M. & A.	Muenster	306-682-3317		F		
Redman, Wayne G. & Collin M.	Margo	306-324-4235				C
Rempel, Blair Allan	Nipawin	306-862-3573	S			
Rude, Stanley	Naicam	306-874-2359			R	C
Rugg, Barry C. & Robert B.	Elstow	306-257-3638			R	
Sandercock, Eric M.	Balcarres	306-334-2958				C
Sanderson, Donald Stewart	Rosetown	306-882-3317			R	
Seidle, E. & B. & C. & M.	Medstead	306-342-4377			R	C
Shwaga, Jeff W.	Wroxton	306-742-4590				C
Slind, Donald Edward	Archerwill	306-323-4927				C
Sopatyk, Jeffery & Patti	Saskatoon	306-955-2516			R	
South, Winston & Richard & Bradley	Melfort	306-752-9840			R	C
Sperle, Bentley D. & Jody	Unity	306-228-3160				C
Stauber, Clayton & Lori	Stewart Valley	306-773-7907				C
Tomtene, Terry, Steven & Slind, Daniel	Birch Hills	306-749-3230	S		R	
Trawin, Brent John	Melfort	306-752-4060	S	F	R	
Trawin, John	Melfort	306-752-4060			R	
Trowell, Bert & Kenneth & Larry	Saltcoats	306-744-2687		F	R	
Trowell, Leslie	Saltcoats	306-744-2684			R	
Van Burck, Hans & Marianne	Star City	306-863-4377		F	R	
Wakefield, Monica & Laurie Garland	Maidstone	306-893-2984			R	
Watson, Wayne Donald & Calvin & Mark	Avonlea	306-868-2171			R	
Wilfing, Raymond John & Ryan John	Meadow Lake	306-236-6811				C
Wood, Leonard David	Wynyard	306-554-2932				C
Woroschuk, Andrew	Calder	306-742-4682				C
Wylie, Leslie Dale	Biggar	306-948-5394			R	
Yauck, Kevin Rodney	Govan	306-484-4555				C
Youzwa, Donald	Nipawin	306-862-5690			R	
Zwingli, James Trent & Shelley	Melfort	306-752-4224			R	
CDC COWBOY						
Fedoruk, Rod M. & Cathy	Kamsack	306-542-4235		F	R	
Froese, Terrance P.	Rabbit Lake	306-824-2121			R	
Van Burck, Hans & Marianne	Star City	306-863-4377		F		
CDC KENDALL						
Viterra	Regina	306-569-4082	S	F	R	C
CDC MCGWIRE						
Denis, Michel P. & Marc	St. Denis	306-258-2075		F		C
Froese, Terrance P.	Rabbit Lake	306-824-2121				C
Martodam, Robert	Spiritwood	306-883-2091				C
Pender, Joseph M.	Saskatoon	306-374-4933	S			
Sopatyk, Jeffery & Patti	Saskatoon	306-955-2516				C
Van Burck, Hans & Marianne	Star City	306-863-4377			R	C
CDC TREY						
Danielson, Lionel & Bonnie	Norquay	306-594-2173				C
Fedoruk, Rod M. & Cathy	Kamsack	306-542-4235			R	C
Froese, Terrance P.	Rabbit Lake	306-824-2121			R	
Palmier, Maurice	Lafleche	306-472-5917				C
Trowell, Leslie	Saltcoats	306-744-2684		F	R	
CHAMPION						
Viterra	Saskatoon	800-565-7333	S			
CONLON						
Bochek, Bob J.	Hodgeville	306-677-2548				C

Booy, Jerry N. & Murray T. & Darcy K.	Glaslyn	306-342-2058				C
Crosson, Lorne & Will	Welwyn	306-733-4593				C
Fedoruk, Rod M. & Cathy	Kamsack	306-542-4235				C
Herle, Raymond & Gregory R.	Wilke	306-843-2934				C
Pfeifer, Robert G.	Lemberg	306-335-2532				C
Seed Depot Corporation	Pilot Mound	204-825-2000				C
FORMOSA						
Bailey, Roy G.	Milden	306-935-4702	S		R	
Smith, Ron T.W. & Barb A.	Limerick	306-263-4944			R	
Van Burck, Hans & Marianne	Star City	306-863-4377	S		R	
HARRINGTON						
Booy, Jerry N. & Murray T. & Darcy K.	Glaslyn	306-342-2058				C
Boxall, James Kelly	Nipawin	306-862-9573				C
LACEY						
Sopatyk, Jeffery & Patti	Saskatoon	306-955-2516	S		R	C
Tomtene, Terry, Steven & Slind, Daniel	Birch Hills	306-749-3230			R	C
LEGACY						
Ardell, Terrence Wade, Michael, Brad & Joanne	Vanscoy	306-668-4415			R	C
Berscheid, K.N. & B. & E.K. & S. & C. & Y.	Lake Lenore	306-368-2602	S			C
Cay, Randy D.	Kinistino	306-864-3696			R	C
Clark, Shaun & Gilchrist, Armand & Gibbings, Neil	Rosetown	306-882-2058			R	
Fedoruk, Rod M. & Cathy	Kamsack	306-542-4235		F		C
Fenton, Gerald A. & Robin Paul	Tisdale	306-873-5438	S	F	R	
Hanmer, Ronald F., Kent, Brad & Dallas	Govan	306-484-4327			R	
Hardy, Brian & Calvin	Grenfell	306-697-3127	S			C
Hetland, Bill	Naicam	306-874-5694	S		R	
Kaeding, Roger W. & Warren	Churchbridge	306-896-2236		F		C
Novak, Orrin	Kuroki	306-338-2021	S			C
Olson, Lyndon Ordon	Archerwill	306-323-4912				C
Ostafie, Dave & Robert	Canora	306-563-6244		F		C
Redman, Wayne G. & Collin M.	Margo	306-324-4235			R	
Sopatyk, Jeffery & Patti	Saskatoon	306-955-2516	S			
South, Winston & Richard & Bradley	Melfort	306-752-9840				C
Tomtene, Terry, Steven & Slind, Daniel	Birch Hills	306-749-3230		F		C
Van Burck, Hans & Marianne	Star City	306-863-4377	S		R	
Viterra	Saskatoon	800-565-7333			R	C
Viterra	Regina	306-569-4082	S	F	R	C
Wittig, Donald O.	Watson	306-287-3915				C
MCLEOD						
Viterra	Saskatoon	800-565-7333	S	F	R	C
Viterra	Regina	306-569-4082	S			
MILLHOUSE						
Froese, Terrance P.	Rabbit Lake	306-824-2121			R	
Hicks, Thomas R. & Kim R. & Meadows, Kelvin	Moose Jaw	306-694-5338			R	
Hyndman, Neil S.	Balcarres	306-334-2914			R	
Kennett, Brian Guy	Manor	306-448-4813			R	
Tomtene, Terry, Steven & Slind, Daniel	Birch Hills	306-749-3230		F		
NEWDALE						
Bailey, Roy G.	Milden	306-935-4702		F		
Berscheid, K.N. & B. & E.K. & S. & C. & Y.	Lake Lenore	306-368-2602			R	C
Buziak, Ronald Charles	Mayfair	306-445-6556			R	
Cay, Randy D.	Kinistino	306-864-3696			R	
Edwards, Lawrence R., Donna, Jeff & Mike	Nokomis	306-528-2140			R	
Farley, William M. & James P.	Grand Coulee	306-757-6844				C
Fedoruk, Rod M. & Cathy	Kamsack	306-542-4235			R	
Hardy, Allan W. & Dale & Evan	Grenfell	306-697-3128	S			C

Herle, Raymond & Gregory R.	Wilkie	306-843-2934			R	
Kennett, Brian Guy	Manor	306-448-4813			R	
Lueke, Dennis	Humboldt	306-682-5170				C
Ostafie, Dave & Robert	Canora	306-563-6244			R	
Smith, Wayne D.	Limerick	306-263-2144			R	
Tebbutt, Ronald E. & Gregg	Nipawin	306-862-9730			R	
Tomtene, Terry, Steven & Slind, Daniel	Birch Hills	306-749-3230	S		R	
Trawin, John	Melfort	306-752-4060		F		C
Trowell, Leslie	Saltcoats	306-744-2684			R	
Wilfing, Raymond John & Ryan John	Meadow Lake	306-236-6811			R	
ROBUST						
Beuker, Allan Daniel	Melfort	306-863-2225				C
STOCKFORD						
Viterra	Saskatoon	800-565-7333	S	F	R	C
SUNDRE						
Danielson, Lionel & Bonnie	Norquay	306-594-2173				C
Fritzler, Baine A., Brenda D. & Adam A.	Govan	306-484-4612			R	
Wohlgemuth, Mark	Bredenbury	306-898-2022			R	
TRADITION						
Berscheid, K.N. & B. & E.K. & S. & C. & Y.	Lake Lenore	306-368-2602	S	F		C
Boyd, Clare W. & Dale A.	Melfort	306-752-2108				C
Cay, Randy D.	Kinistino	306-864-3696		F		C
Dangstorp, Emil & Brian	Redvers	306-452-3444				C
Fedoruk, Rod M. & Cathy	Kamsack	306-542-4235	S			C
Fenton, Gerald A. & Robin Paul	Tisdale	306-873-5438		F		C
Fraser, Edward H. & Glen & Dale	Yarbo	306-745-3830				C
Hetland, Bill	Naicam	306-874-5694	S		R	
Hyndman, Glen	Balcarres	306-334-2914			R	
Mannle, Kenneth & Laurie	Moosomin	306-435-3411	S	F		
Ostafie, Dave & Robert	Canora	306-563-6244	S			C
Sopatyk, Jeffery & Patti	Saskatoon	306-955-2516	S		R	
Tomtene, Terry, Steven & Slind, Daniel	Birch Hills	306-749-3230		F		C
Trowell, Leslie	Saltcoats	306-744-2684		F		C
Viterra	Regina	306-569-4082			R	C
Yauck, Kevin Rodney	Govan	306-484-4555	S			C
XENA						
Viterra	Saskatoon	800-565-7333	S	F	R	C
Viterra	Regina	306-569-4082			R	C

OATS

7600M						
Viterra	Saskatoon	800-565-7333	S	F	R	C
AC MORGAN						
Ardell, Terrence Wade, Michael, Brad & Joanne	Vanscoy	306-668-4415		F	R	C
Beuker, Allan Daniel	Melfort	306-863-2225				C
Beuker, Wilbur A.	Melfort	306-863-2225	S			
Boyd, Clare W. & Dale A.	Melfort	306-752-2108				C
Edmunds, Greg & Glen	Tisdale	306-873-5480				C
Hetland, Bill	Naicam	306-874-5694			R	C
Kasko, F. John	Prince Albert	306-764-2875				C
Lung Seeds Ltd.	Lake Lenore	306-368-2414			R	
Olson, Lyndon Ordon	Archerwill	306-323-4912				C
Palmier, Maurice	Lafleche	306-472-5917			R	
Rempel, Blair Allan	Nipawin	306-862-3573				C
Rugg, Barry C. & Robert B.	Elstow	306-257-3638			R	
Sanderson, Donald Stewart	Rosetown	306-882-3317			R	
Seidle, E. & B. & C. & M.	Medstead	306-342-4377	S	F	R	C
Shewchuk, Stan & Lorne & Terry	Krydor	306-497-2800			R	
South, Winston & Richard & Bradley	Melfort	306-752-9840				C
Tebbutt, Ronald E. & Gregg	Nipawin	306-862-9730				C
Trawin, John	Melfort	306-752-4060				C
Trowell, Bert & Kenneth & Larry	Saltcoats	306-744-2687		F	R	
Wilfing, Raymond John & Ryan John	Meadow Lake	306-236-6811			R	C

Woroschuk, Andrew	Calder	306-742-4682			R	
Zwingli, James Trent & Shelley	Melfort	306-752-4224			R	
BOUDRIAS						
Fenton, Gerald A. & Robin Paul	Tisdale	306-873-5438	S			C
CDC BALER						
Lueke, Dennis	Humboldt	306-682-5170				C
CDC BOYER						
Ennis, Garnet & Burton & Neil	Glenavon	306-429-2793			R	
Murray, Scott & Ross	Young	306-259-4944			R	
Stoll, Douglas John, Joan & Lyndon	Delisle	306-493-2534			R	C
CDC DANCER						
Fedoruk, Rod M. & Cathy	Kamsack	306-542-4235				C
Froese, Terrance P.	Rabbit Lake	306-824-2121				C
Heggie, Robert Thomas	Leross	306-675-4920				C
Hyndman, Glen	Balcarres	306-334-2914			R	
Kaeding, Roger W. & Warren	Churchbridge	306-896-2236				C
Littman, Larry W. & Allan B. & L.R.	Saltcoats	306-783-6518	S	F		C
Lueke, Dennis	Humboldt	306-682-5170		F		C
Novak, Orrin	Kuroki	306-338-2021				C
Olson, Lyndon Ordon	Archerwill	306-323-4912				C
Ostafie, Dave & Robert	Canora	306-563-6244				C
Trowell, Leslie	Saltcoats	306-744-2684	S	F	R	C
CDC ORRIN						
Berscheid, K.N. & B. & E.K. & S. & C. & Y.	Lake Lenore	306-368-2602				C
Cay, Randy D.	Kinistino	306-864-3696				C
Fenton, Gerald A. & Robin Paul	Tisdale	306-873-5438		F	R	C
Mayerle, Kris	Tisdale	306-873-4261				C
Tomtene, Terry, Steven & Slind, Daniel	Birch Hills	306-749-3230			R	C
CDC PROFI						
Charabin, Dale Kenneth & Timothy V. & Ryan	North Battleford	306-445-2939	S			
Froese, Terrance P.	Rabbit Lake	306-824-2121		F		
Lueke, Dennis	Humboldt	306-682-5170	S			
CDC SO-I						
Charabin, Dale Kenneth & Timothy V. & Ryan	North Battleford	306-445-2939		F		
Clark, Shaun & Gilchrist, Armand & Gibbings, Neil	Rosetown	306-882-2058	S			
Hardy, Allan W. & Dale & Evan	Grenfell	306-697-3128	S			
Littman, Larry W. & Allan B. & L.R.	Saltcoats	306-783-6518		F		
Trowell, Leslie	Saltcoats	306-744-2684	S	F		
CDC WEAVER						
Berscheid, K.N. & B. & E.K. & S. & C. & Y.	Lake Lenore	306-368-2602		F		
Fedoruk, Rod M. & Cathy	Kamsack	306-542-4235		F		C
Fraser, Edward H. & Glen & Dale	Yarbo	306-745-3830			R	C
Heggie, Kyle Robert	Leross	306-675-4920			R	
Hyndman, Glen	Balcarres	306-334-2914	S			
Lepp, Milton & Elden; & Neufeld, M.	Hepburn	306-254-4243			R	
Littman, Larry W. & Allan B. & L.R.	Saltcoats	306-783-6518			R	C
Mayerle, Erwin D.	Tisdale	306-873-4261			R	
Ostafie, Dave & Robert	Canora	306-563-6244	S	F		
Smith, Ron T.W. & Barb A.	Limerick	306-263-4944				C
Trowell, Leslie	Saltcoats	306-744-2684		F	R	
Wilfing, Raymond John & Ryan John	Meadow Lake	306-236-6811		F		
DERBY						
Viterra	Saskatoon	800-565-7333			R	
FURLONG						
Johnson, Oscar Stuart	Margo	306-324-4315				C

GEHL						
Froese, Terrance P.	Rabbit Lake	306-824-2121	S			
HIFI						
Seed Depot Corporation	Pilot Mound	204-825-2000				C
JORDAN						
Beuker, Wilbur A.	Melfort	306-863-2225	S			
Elmy, Robert W., Kevin & Christina	Saltcoats	306-744-2779	S	F		
Hetland, Bill	Naicam	306-874-5694	S	F		
Ostafie, Dave & Robert	Canora	306-563-6244	S	F		
Pratchler, John & L. & M. & A.	Muenster	306-682-3317	S			C
Stoll, Douglas John, Joan & Lyndon	Delisle	306-493-2534			R	
Trawin, John	Melfort	306-752-4060		F		
Trowell, Bert & Kenneth & Larry	Saltcoats	306-744-2687	S	F		
KAUFMANN						
Hanowski, Larry & Marian	Melville	306-728-3223			R	
Woroschuk, Andrew	Calder	306-742-4682				C
LEGGETT						
Boyd, Clare W. & Dale A.	Melfort	306-752-2108	S		R	
Clark, Shaun & Gilchrist, Armand & Gibbings, Neil	Rosetown	306-882-2058	S			
Danielson, Lionel & Bonnie	Norquay	306-594-2173	S			
Edwards, Lawrence R., Donna, Jeff & Mike	Nokomis	306-528-2140	S			
Fedoruk, Rod M. & Cathy	Kamsack	306-542-4235		F		
Fenton, Gerald A. & Robin Paul	Tisdale	306-873-5438	S	F		
Kaeding, Roger W. & Warren	Churchbridge	306-896-2236				C
Lueke, Dennis	Humboldt	306-682-5170	S			C
McCarthy, Richard J. & Brent	Corning	306-224-4848		F		
Tebbutt, Ronald E. & Gregg	Nipawin	306-862-9730			R	
Tomtene, Terry, Steven & Slind, Daniel	Birch Hills	306-749-3230	S			
Woods, Dale Arthur & June	Rocanville	306-645-4423			R	
LU						
Berscheid, Daniel	Lake Lenore	306-682-3488	S	F		
Carlson, Herbert E.P. & Leslie	Buchanan	306-592-4449			R	
Elmy, Robert W., Kevin & Christina	Saltcoats	306-744-2779	S	F		
Klemmer, Richard	Nipawin	306-862-3874				C
Olson, Lyndon Ordon	Archerwill	306-323-4912				C
Rayner, Loren	Stenen	306-548-4655			R	
Shewchuk, Stan & Lorne & Terry	Krydor	306-497-2800				C
PINNACLE						
Ardell, Terrence Wade, Michael, Brad & Joanne	Vanscoy	306-668-4415		F	R	C
Craswell, Raymond W.	Strasbourg	306-725-3236			R	
Farley, William M. & James P.	Grand Coulee	306-757-6844				C
Hicks, Thomas R. & Kim R. & Meadows, Kelvin	Moose Jaw	306-694-5338			R	
Kennett, Brian Guy	Manor	306-448-4813				C
RONALD						
Holland, Ernest W.	Rocanville	306-645-4223				C
Ostafie, Dave & Robert	Canora	306-563-6244				C
Rayner, Loren	Stenen	306-548-4655			F	C
SW BETANIA						
Viterra	Saskatoon	800-565-7333	S	F	R	C
TRIACTOR						
Canterra Seeds Ltd.	Winnipeg	204-988-9750	S			
Fedoruk, Rod M. & Cathy	Kamsack	306-542-4235	S			
South, Winston & Richard & Bradley	Melfort	306-752-9840	S			
Trowell, Leslie	Saltcoats	306-744-2684	S			
Woods, Dale Arthur & June	Rocanville	306-645-4423	S			

RYE

DAKOTA						
Viterra	Saskatoon	800-565-7333	S	F		C

HAZLET

Bailey, Roy G.	Milden	306-935-4702		F		
Kaeding, Roger W. & Warren	Churchbridge	306-896-2236	S			C
Ostafie, Dave & Robert	Canora	306-563-6244		F		
Trawin, John	Melfort	306-752-4060				C
Willner, Lorne E.	Davidson	306-567-4613		F		

TRITICALE

AC ULTIMA

Kaeding, Roger W. & Warren	Churchbridge	306-896-2236				C

BANJO

Farley, William M. & James P.	Grand Coulee	306-757-6844				C

BUNKER

Farley, William M. & James P.	Grand Coulee	306-757-6844		F		
Froese, Terrance P.	Rabbit Lake	306-824-2121		F		
Girodat, Gerald	Shaunavon	306-297-2913	S			
Kaeding, Roger W. & Warren	Churchbridge	306-896-2236	S			
Maze, Norman Daryl	Unity	306-398-2637			R	
Trawin, John	Melfort	306-752-4060		F		

TYNDAL

Johnson, Oscar Stuart	Margo	306-324-4315			R	
Novak, Orrin	Kuroki	306-338-2021		F		

FRIDGE

Elmy, Robert W., Kevin & Christina	Saltcoats	306-744-2779		F		C

WHEAT - DURUM

AC AVONLEA

Calcutt, Clifford W.	Lemberg	306-335-2860				C
Hyndman, David	Balcarres	306-334-2914				C

AC NAVIGATOR

Hundeby, R. & D. & R. & A. & K. & L. & Wonnick, Adam	Elbow	306-854-4629				C
Sudom, Michael B.	Avonlea	306-868-2081	S	F	R	C
Viterra	Regina	306-569-4082	S	F	R	C

COMMANDER

Viterra	Regina	306-569-4082	S		R	

KYLE

Garratt, Lyle C. & K.C.	Milestone	306-436-2178			R	
Needham, Reginald R.	Oxbow	306-483-5052				C
Needham, Ronald Clarence	Oxbow	306-483-5063	S	F		
Travland, Glenn & Marie	Coronach	306-267-4916		F	R	
Watson, Wayne Donald & Calvin & Mark	Avonlea	306-868-2171			R	

NAPOLEON

Pfeifer, Robert G.	Lemberg	306-335-2532			R	

STRONGFIELD

Altwasser, Rodney & Allen R. & Dean	Yellow Grass	306-465-2727				C
Anderson, Murray Robert	Biggar	306-948-2842				C
Annand, Glenn	Mossbank	306-354-7675		F		C
Ardell, Terrence Wade, Michael, Brad & Joanne	Vanscoy	306-668-4415		F		C
Bailey, Roy G.	Milden	306-935-4702		F		C
Barlow, Bradley L.	Griffin	306-842-6216		F		C
Bergstrom, Randy M.	Birsay	306-573-4625				C
Bews Agrow Ltd.	Eatonia	306-967-2440	S	F		C
Blenkin, Leonard G. & Larry K.	Sintaluta	306-727-2222				C
Boyd, William R. & Regan	Eston	306-962-3526			R	
Carefoot, Floyd Martin	Swift Current	306-773-6963				C
Craswell, Raymond W.	Strasbourg	306-725-3236				C
Dobson, Curtis & Alison	Rouleau	306-776-2500				C
Dowdeswell, Donald D.	Pennant	306-626-3388				C
Fast, Walter J. & Linda	Kindersley	306-463-3626			R	
Floberg, Barry & Delana & Devin & Brandon	Shaunavon	306-297-2087			R	C
Forer, Tim & Denise	Avonlea	306-868-4433				C
Fritzler, Baine A., Brenda D. & Adam A.	Govan	306-484-4612				C

Garratt, Lyle C. & K.C.	Milestone	306-436-2178			R	C
Geiger, Timothy	Leader	306-628-4335			R	
Gerry, Greg	Creelman	306-457-2220				C
Girodat, Gerald	Shaunavon	306-297-2913				C
Hansen, James S.	Yellow Grass	306-465-2525				
Heebner, Brennen	Vanguard	306-582-6024				C
Herle, Raymond & Gregory R.	Wilkie	306-843-2934				C
Hyndman, David	Balcarres	306-334-2914		F		C
Hyndman, Glen	Balcarres	306-334-2914				C
Johnston, Lorne E. & L. Neil & L. J.	Eston	306-962-3917			R	C
Kemper, Kenneth W. & Armella	Humboldt	306-682-3570				C
Kemper, Russell & Donna	Fulda	306-682-4929				C
Klym, Roy & Vern	Regina	306-543-5052				C
Leduc, Gerald R.	Assiniboia	306-642-3076	S			C
Lindsay, Robert Stewart	Assiniboia	306-642-5369				C
Lutzer, Albert & Latrace, Jim	Lumsden	306-731-2843			R	
Miller, Neil, Lynwood, Jarrod, Sean & Bruce	Avonlea	306-868-2165		F		C
Needham, Reginald R.	Oxbow	306-483-5052				C
Palmier, Maurice	Lafleche	306-472-5917				C
Patzer, Wendell Albert	Frontier	306-296-4780			R	
Petruic, Cameron L., Judy & Nick	Avonlea	306-868-2294		F	R	
Reisner, Cecil & Barry	Limerick	306-263-2139			R	
Renwick, Douglas Dale	Milestone	306-436-4418			R	
Sandercock, Eric M.	Balcarres	306-334-2958				C
Sanderson, Donald Stewart	Rosetown	306-882-3317	S			
Sanderson, Everett D. & Wanda	Rosetown	306-882-3371				C
Schmeling, Donald H.	Riceton	306-738-2064				C
Seymour, G.P, Donne, Kyle & Kelly & R. Thistlethwaite	Stewart Valley	306-778-2344	S		R	C
Simpson, John W.	Moose Jaw	306-693-2132				C
Smith, Ron T.W. & Barb A.	Limerick	306-263-4944			R	C
Smith, Wayne D.	Limerick	306-263-2144				C
Stauber, Clayton & Lori	Stewart Valley	306-773-7907				C
Stirton, Brian James	Moose Jaw	306-693-2310				C
Straub, Lorne A.	Pense	306-345-2390				C
Tanner, David A. & Hazel	Regina	306-757-7012		F		
Watson, Wayne Donald & Calvin & Mark	Avonlea	306-868-2171	S	F		
Willner, Lorne E.	Davidson	306-567-4613	S	F	R	

WHEAT - SPRING

5400IP

Viterra	Saskatoon	800-565-7333	S	F	R	C

5602HR

Viterra	Saskatoon	800-565-7333	S	F	R	C

5700PR

Viterra	Saskatoon	800-565-7333	S	F	R	C

5701PR

Viterra	Saskatoon	800-565-7333	S	F	R	C

AC ANDREW

Ackerman, Patrick	Chamberlain	306-638-3177			R	
Bergstrom, Randy M.	Birsay	306-573-4625				C
Berscheid, K.N. & B. & E.K. & S. & C. & Y.	Lake Lenore	306-368-2602	S			
Buziak, Ronald Charles	Mayfair	306-445-6556			R	
Charabin, Dale Kenneth & Timothy V. & Ryan	North Battleford	306-445-2939			R	
Craswell, Raymond W.	Strasbourg	306-725-3236			R	
Dutton, David H. & George	Paynton	306-895-4306				C
Edwards, Lawrence R., Donna, Jeff & Mike	Nokomis	306-528-2140	S			
Fast, Walter J. & Linda	Kindersley	306-463-3626	S			
Fedoruk, Rod M. & Cathy	Kamsack	306-542-4235	S			
Forster, Glenn M. & Patrick & Marthe	Lake Lenore	306-682-3485	S	F		
Fritzler, Baine A., Brenda D. & Adam A.	Govan	306-484-4612	S		R	
Gerry, Greg	Creelman	306-457-2220			R	
Hansen, James S.	Yellow Grass	306-465-2525			R	
Herle, Raymond & Gregory R.	Wilkie	306-843-2934			R	

Lutzer, Albert & Latrace, Jim	Lumsden	306-731-2843			R	
Mannle, Kenneth & Laurie	Moosomin	306-435-3411			R	
McCarthy, Richard J. & Brent	Corning	306-224-4848			R	
McDougall, Ken & Craig	Moose Jaw	306-693-3649			R	
Moroz, Troy	Pelly	306-595-4622	S			
Nakonechny, Peter, Don P., Joyce, Coral & Lance	Ruthilda	306-932-4409		F	R	
Sheppard, William H.	Lucky Lake	306-858-2717				C
Sopatyk, Jeffery & Patti	Saskatoon	306-955-2516			R	
Stauber, Clayton & Lori	Stewart Valley	306-773-7907			R	
Straub, Lorne A.	Pense	306-345-2390	S		R	
Swenson, Richard James	Moose Jaw	306-692-5060			R	
Tomtene, Terry, Steven & Slind, Daniel	Birch Hills	306-749-3230			R	
Trawin, John	Melfort	306-752-4060	S			
Winterhalt, Tim	Unity	306-228-3170			R	
Yuke, Blair	Moose Jaw	306-691-0085			R	
AC BARRIE						
Allan, J. Garth	Corning	306-457-2729				C
Amos, K. Wayne	Oxbow	306-483-2963				C
Blenkin, Leonard G. & Larry K.	Sintaluta	306-727-2222				C
Dangstorp, Emil & Brian	Redvers	306-452-3444			R	
Edmunds, Greg & Glen	Tisdale	306-873-5480			R	
Fowler, Edith	Central Butte	306-796-4652				C
Heavin, Milton Russell	Melfort	306-752-4071				C
Lepp, Milton & Elden; & Neufeld, M.	Hepburn	306-254-4243				C
Peterson, S.P., Daniel & Gordon	Wynyard	306-554-3396				C
Reisner, Cecil & Barry	Limerick	306-263-2139			R	C
Schiltroth, John Mark	Ridgedale	306-873-4967				C
Trawin, John	Melfort	306-752-4060			R	
Woroschuk, Andrew	Calder	306-742-4682				C
AC CRYSTAL						
Allan, John R. & John Garth	Corning	306-457-2629			R	
Allan, John Richard	Corning	306-457-2729				C
Allan, Raymond N. & Ruth	Corning	306-224-4666				C
Berscheid, K.N. & B. & E.K. & S. & C. & Y.	Lake Lenore	306-368-2602				C
Bews Agrow Ltd.	Eatonia	306-967-2440				C
Bryant, Lee & Phyl & Vern & Carol	Battleford	306-937-3565				C
Buziak, Ronald Charles	Mayfair	306-445-6556				C
Charabin, Dale Kenneth & Timothy V. & Ryan	North Battleford	306-445-2939				C
Edmunds, Greg & Glen	Tisdale	306-873-5480				C
Hyndman, Neil S.	Balcarres	306-334-2914				C
Laxdal, G.M.; Blyth, D., Gregory, Wayne & Richard & Bolt, Glen A.	Wynyard	306-554-2078				C
Schiltroth, John Mark	Ridgedale	306-873-4967				C
Sperle, Bentley D. & Jody	Unity	306-228-3160		F		
Van Burck, Hans & Marianne	Star City	306-863-4377			R	
Young, Denise	Melfort	306-752-4060			R	
AC ELSA						
Bailey, Roy G.	Milden	306-935-4702		F		C
Blenkin, Leonard G. & Larry K.	Sintaluta	306-727-2222				C
Ennis, Garnet & Burton & Neil	Glenavon	306-429-2793	S			C
Gregoire, Denis	North Battleford	306-445-5516			R	C
Hardy, Allan W. & Dale & Evan	Grenfell	306-697-3128				C
Herndier, Don O.	Lemberg	306-335-2763				C
McCarthy, Richard J. & Brent	Corning	306-224-4848				C
Meyer, Ward	Lake Lenore	306-368-2635				C
Palmier, Maurice	Lafleche	306-472-5917				C
Pratchler, John & L. & M. & A.	Muenster	306-682-3317				C
Reisner, Cecil & Barry	Limerick	306-263-2139			R	
Rude, Stanley	Naicam	306-874-2359				C
Smith, Ron T.W. & Barb A.	Limerick	306-263-4944				C
Trowell, Larry	Saltcoats	306-744-2604	S			C
Wakefield, Monica & Laurie Garland	Maidstone	306-893-2984			R	C
Will, Gordon James	Mortlach	306-355-2289				C
Woroschuk, Andrew	Calder	306-742-4682				C

AC FOREMOST						
Froese, Terrance P.	Rabbit Lake	306-824-2121				C
Wilfing, Raymond John & Ryan John	Meadow Lake	306-236-6811				C
AC INTREPID						
Cay, Randy D.	Kinistino	306-864-3696			R	
Illingworth, H.V. & T. D.	North Battleford	306-445-5630			R	
Slind, Donald Edward	Archerwill	306-323-4927				C
Veikle, Lorne A. & Carl E. & G. & J.	Cut Knife	306-398-4714				C
AC SPLENDOR						
Beuker, Allan Daniel	Melfort	306-863-2225				C
AC VISTA						
Bailey, Roy G.	Milden	306-935-4702	S			
Boyd, Clare W. & Dale A.	Melfort	306-752-2108				C
Charabin, Dale Kenneth & Timothy V. & Ryan	North Battleford	306-445-2939				C
Craswell, Raymond W.	Strasbourg	306-725-3236			R	
Fenton, Gerald A. & Robin Paul	Tisdale	306-873-5438	S	F	R	
Hardy, Allan W. & Dale & Evan	Grenfell	306-697-3128			R	C
Heggie, Kyle Robert	Leross	306-675-4920				C
Kaeding, Roger W. & Warren	Churchbridge	306-896-2236	S			C
Wilfing, Raymond John & Ryan John	Meadow Lake	306-236-6811				C
ALVENA						
Bailey, Roy G.	Milden	306-935-4702			R	
Boyd, Clare W. & Dale A.	Melfort	306-752-2108			R	
Buziak, Ronald Charles	Mayfair	306-445-6556			R	
Carlson, Herbert E.P. & Leslie	Buchanan	306-592-4449			R	
Fedoruk, Rod M. & Cathy	Kamsack	306-542-4235			R	
Heavin, Larry N. & L. Warren	Melfort	306-752-4020	S		R	
Ostafie, Dave & Robert	Canora	306-563-6244	S		R	
Rempel, Blair Allan	Nipawin	306-862-3573			R	
Shwaga, Jeff W.	Wroxton	306-742-4590			R	
Tomtene, Terry, Steven & Slind, Daniel	Birch Hills	306-749-3230	S			
Veikle, Lorne A. & Carl E. & G. & J.	Cut Knife	306-398-4714			R	
BHISHAJ						
Crooymans, Tony, John, Joseph & Andrew	Bow Island	403-545-6206				C
Hetland, Bill	Naicam	306-874-5694	S			C
Mannle, Kenneth & Laurie	Moosomin	306-435-3411				C
Redman, Wayne G. & Collin M.	Margo	306-324-4235				C
CDC ABOUND						
Viterra	Regina	306-569-4082	S	F	R	
CDC ALSASK						
Viterra	Regina	306-569-4082	S		R	
CDC GO						
Fritzler, Baine A., Brenda D. & Adam A.	Govan	306-484-4612				C
Heavin, G. Harvey & G. Ryan	Melfort	306-752-4171		F		
Lung Seeds Ltd.	Lake Lenore	306-368-2414				C
Nystuen, David G.	Spalding	306-872-2014	S			C
Ostapovitch, F.G. & Glen	Theodore	306-647-2205			R	
University of Saskatchewan	Saskatoon	306-931-9299				C
CDC IMAGINE						
Heggie, Kyle Robert	Leross	306-675-4920			R	
Viterra	Regina	306-569-4082	S	F	R	C
Viterra	Saskatoon	800-565-7333	S	F	R	C
Wallington, Lionel & Matt	Tisdale	306-873-4935				C
CDC OSLER						
Beuker, Wilbur A.	Melfort	306-863-2225		F		C
Slind, Donald Edward	Archerwill	306-323-4927				C
CDC RAMA						
Fedoruk, Rod M. & Cathy	Kamsack	306-542-4235				C

Hardy, Allan W. & Dale & Evan	Grenfell	306-697-3128	S			C
Littman, Larry W. & Allan B. & L.R.	Saltcoats	306-783-6518				C
CDC TEAL						
Bailey, Roy G.	Milden	306-935-4702				C
Blenkin, Leonard G. & Larry K.	Sintaluta	306-727-2222				C
Calcutt, Clifford W.	Lemberg	306-335-2860				C
Calcutt, Garry M.	Lemberg	306-335-2760				C
Charabin, Dale Kenneth & Timothy V. & Ryan	North Battleford	306-445-2939				C
Dowdeswell, Donald D.	Pennant	306-626-3388				C
Fenton, Gerald A. & Robin Paul	Tisdale	306-873-5438	S	F		C
Hardy, Allan W. & Dale & Evan	Grenfell	306-697-3128		F		C
Hardy, Brian & Calvin	Grenfell	306-697-3127				C
Hetland, Bill	Naicam	306-874-5694				C
Simcoe Agservices Inc.	Swift Current	306-773-0803				C
Smith, Wayne D.	Limerick	306-263-2144			R	C
COLUMBUS						
Titman, David G. & Loa L.	Viscount	306-944-4236	S	F	R	C
GOODEVE						
Cay, Randy D.	Kinistino	306-864-3696	S			
Charabin, Dale Kenneth & Timothy V. & Ryan	North Battleford	306-445-2939	S			
Fast, Walter J. & Linda	Kindersley	306-463-3626	S			
Hetland, Bill	Naicam	306-874-5694	S			
Hyndman, Neil S.	Balcarres	306-334-2914	S			
Ostafie, Dave & Robert	Canora	306-563-6244	S			
Van Burck, Hans & Marianne	Star City	306-863-4377	S			
HARVEST						
Buziak, Ronald Charles	Mayfair	306-445-6556			R	C
Charabin, Dale Kenneth & Timothy V. & Ryan	North Battleford	306-445-2939			R	
Danielson, Lionel & Bonnie	Norquay	306-594-2173				C
Dell, Dennis & Bonnie A.	Dafoe	306-554-3117				C
Fedoruk, Rod M. & Cathy	Kamsack	306-542-4235				C
Froese, Terrance P.	Rabbit Lake	306-824-2121				C
Hardy, Allan W. & Dale & Evan	Grenfell	306-697-3128			R	
Hetland, Bill	Naicam	306-874-5694				C
Laxdal, G.M.; Blyth, D., Gregory, Wayne & Richard & Bolt, Glen A.	Wynyard	306-554-2078	S	F	R	
Mayerle, Erwin D.	Tisdale	306-873-4261				C
Ostafie, Dave & Robert	Canora	306-563-6244	S	F	R	C
Smith, Wayne D.	Limerick	306-263-2144			R	
Van Burck, Hans & Marianne	Star City	306-863-4377	S	F		C
Wakefield, Monica & Laurie Garland	Maidstone	306-893-2984				C
Weightman, Brian	Rosthern	306-232-5588				C
Wilfing, Raymond John & Ryan John	Meadow Lake	306-236-6811				C
INFINITY						
Ardell, Terrence Wade, Michael, Brad & Joanne	Vanscoy	306-668-4415			R	
Berscheid, K.N. & B. & E.K. & S. & C. & Y.	Lake Lenore	306-368-2602				C
Buziak, Ronald Charles	Mayfair	306-445-6556				C
Cay, Randy D.	Kinistino	306-864-3696				C
Clark, Shaun & Gilchrist, Armand & Gibbings, Neil	Rosetown	306-882-2058			R	
Dowdeswell, Donald D.	Pennant	306-626-3388				C
Fedoruk, Rod M. & Cathy	Kamsack	306-542-4235			R	
Fraser, Edward H. & Glen & Dale	Yarbo	306-745-3830			R	C
Girodat, Gerald	Shaunavon	306-297-2913			R	
Herle, Raymond & Gregory R.	Wilkie	306-843-2934				C
Hetland, Bill	Naicam	306-874-5694				C
Hyndman, Glen	Balcarres	306-334-2914				C
Hyndman, Neil S.	Balcarres	306-334-2914				C
Illingworth, H.V. & T. D.	North Battleford	306-445-5630		F		C
Johnson, Oscar Stuart	Margo	306-324-4315			R	C
Kaeding, Roger W. & Warren	Churchbridge	306-896-2236			R	C
Kemper, Russell & Donna	Fulda	306-682-4929				C
Labrecque, Roger & Claude	Saskatoon	306-373-9379				C

Lung, Ivan & Schemenauer, S. & B.;	Lake Lenore	306-368-2414				C
Mannle, Kenneth & Laurie	Moosomin	306-435-3411				C
Mayerle, Bernhard C.	Tisdale	306-873-4267				C
Mayerle, Erwin D.	Tisdale	306-873-4261			R	C
Mayerle, Kris	Tisdale	306-873-4261				C
McNevin, Rodney & D. Pihowich	Carrot River	306-768-2491				C
Medernach, Louis J. & Kim L.	Cudworth	306-256-3398				C
Olson, Lyndon Ordon	Archerwill	306-323-4912				C
Pfeifer, Robert G.	Lemberg	306-335-2532			R	
Reisner, Cecil & Barry	Limerick	306-263-2139	S	F		C
Rempel, Blair Allan	Nipawin	306-862-3573				C
Simpson, Trevor W.	Moose Jaw	306-693-2132	S		R	
Slind, Donald Edward	Archerwill	306-323-4927				C
South, Winston & Richard & Bradley	Melfort	306-752-9840				C
Trowell, Leslie	Saltcoats	306-744-2684			R	
Veikle, Lorne A. & Carl E. & G. & J.	Cut Knife	306-398-4714			R	
Yauck, Kevin Rodney	Govan	306-484-4555	S	F	R	
JOURNEY						
Viterra	Saskatoon	800-565-7333	S	F	R	
KANE						
Amos, K. Wayne	Oxbow	306-483-2963	S		R	
Berscheid, K.N. & B. & E.K. & S. & C. & Y.	Lake Lenore	306-368-2602	S	F		
Boyd, Clare W. & Dale A.	Melfort	306-752-2108			R	
Buziak, Ronald Charles	Mayfair	306-445-6556			R	
Carlson, Herbert E.P. & Leslie	Buchanan	306-592-4449			R	
Danielson, Lionel & Bonnie	Norquay	306-594-2173			R	
Fedoruk, Rod M. & Cathy	Kamsack	306-542-4235				C
Greenshields, Grant & Jim & Callie	Semans	306-524-2155	S		R	
Heavin, G. Harvey & G. Ryan	Melfort	306-752-4171	S		R	
Hleck, Leo	Codette	306-862-5966			R	
Ostafie, Dave & Robert	Canora	306-563-6244	S		R	
Rude, Stanley	Naicam	306-874-2359	S			
Sopatyk, Jeffery & Patti	Saskatoon	306-955-2516	S			
Stoll, Douglas John, Joan & Lyndon	Delisle	306-493-2534	S	F		
Tebbutt, Ronald E. & Gregg	Nipawin	306-862-9730			R	
Trowell, Bert & Kenneth & Larry	Saltcoats	306-744-2687			R	C
Viterra	Regina	306-569-4082	S			
KATEPWA						
Tanner, David A. & Hazel	Regina	306-757-7012		F		C
LILLIAN						
Allan, Raymond N. & Ruth	Corning	306-224-4666				C
Altwasser, Rodney & Allen R. & Dean	Yellow Grass	306-465-2727				C
Annand, Glenn	Mossbank	306-354-7675				C
Bergstrom, Randy M.	Birsay	306-573-4625				C
Bews Agrow Ltd.	Eatonia	306-967-2440	S	F		C
Biese, Jerry	Swift Current	306-773-7027				C
Dangstorp, Emil & Brian	Redvers	306-452-3444				C
Denis, Michel P. & Marc	St. Denis	306-258-2075				C
Edwards, Lawrence R., Donna, Jeff & Mike	Nokomis	306-528-2140				C
Fast, Walter J. & Linda	Kindersley	306-463-3626			R	C
Floberg, Barry & Delana & Devin & Brandon	Shaunavon	306-297-2087				C
Fritzler, Baine A., Brenda D. & Adam A.	Govan	306-484-4612				C
Ganshorn, Allan W.	Regina	306-757-8328			R	
Girodat, Gerald	Shaunavon	306-297-2913			R	C
Girodat, Jason	Shaunavon	306-297-2185				C
Greenshields, Grant & Jim & Callie	Semans	306-524-2155				C
Hanowski, Larry & Marian	Melville	306-728-3223				C
Heavin, Larry N. & L. Warren	Melfort	306-752-4020				C
Hyndman, Neil S.	Balcarres	306-334-2914				C
Klym, Roy & Vern	Regina	306-543-5052				C
Leduc, Gerald R.	Assiniboia	306-642-3076				C

Lepp, Milton & Elden; & Neufeld, M.	Hepburn	306-254-4243				C
Lueke, Dennis	Humboldt	306-682-5170				C
Mannle, Kenneth & Laurie	Moosomin	306-435-3411				C
McCutcheon, Orville & David	Outlook	306-856-2265				C
McDougall, Ken & Craig	Moose Jaw	306-693-3649			R	
Meyer, Ward	Lake Lenore	306-368-2635				C
Palchinski, Michael	Saskatoon	306-654-2050				C
Palmier, Maurice	Lafleche	306-472-5917				C
Patzer, Wendell Albert	Frontier	306-296-4780			R	
Pratchler, John & L. & M. & A.	Muenster	306-682-3317	S			C
Reisner, Cecil & Barry	Limerick	306-263-2139			R	
Ries, George & Larry	Humboldt	306-682-3131				C
Rugg, Barry C. & Robert B.	Elstow	306-257-3638			R	
Sanderson, Everett D. & Wanda	Rosetown	306-882-3371	S			
Schmeling, Donald H.	Riceton	306-738-2064				C
Shewchuk, Stan & Lorne & Terry	Krydor	306-497-2800	S	F		C
Silversides, Roy P. & Ruby N.	Corning	306-457-2639				C
Smith, Wayne D.	Limerick	306-263-2144				C
Sperle, Bentley D. & Jody	Unity	306-228-3160		F		C
Stokke, Terry J. & Shane T.	Watrous	306-946-2566				C
Stoll, Douglas John, Joan & Lyndon	Delisle	306-493-2534				C
Straub, Lorne A.	Pense	306-345-2390		F	R	
Veikle, Lorne A. & Carl E. & G. & J.	Cut Knife	306-398-4714			R	
Watson, Wayne Donald & Calvin & Mark	Avonlea	306-868-2171	S	F		C
Willner, Lorne E.	Davidson	306-567-4613			R	
Woroschuk, Andrew	Calder	306-742-4682				C
Wylie, Leslie Dale	Biggar	306-948-5394				C
Yauck, Arthur	Cymric	306-484-4643				C
Yauck, Kevin Rodney	Govan	306-484-4555				C
MCKENZIE						
Viterra	Saskatoon	800-565-7333	S	F	R	C
Viterra	Regina	306-569-4082	S	F	R	C
PEMBINA						
MacGregor, Robert C.	Garrick	306-276-2384			R	
PRODIGY						
Viterra	Regina	306-569-4082		F	R	C
ROBLIN						
Maxwell, David S.	Nipawin	306-862-9622	S	F		
SNOWBIRD						
Altwasser, Rodney & Allen R. & Dean	Yellow Grass	306-465-2727				C
Amos, K. Wayne	Oxbow	306-483-2963				C
Bailey, Roy G.	Milden	306-935-4702	S			C
Berscheid, K.N. & B. & E.K. & S. & C. & Y.	Lake Lenore	306-368-2602			R	
Charabin, Dale Kenneth & Timothy V. & Ryan	North Battleford	306-445-2939				C
Hardy, Allan W. & Dale & Evan	Grenfell	306-697-3128			R	
Hyndman, Glen	Balcarres	306-334-2914				C
Pratchler, John & L. & M. & A.	Muenster	306-682-3317				C
Schmeling, Donald H.	Riceton	306-738-2064				C
Smith, Ron T.W. & Barb A.	Limerick	306-263-4944				C
Smith, Wayne D.	Limerick	306-263-2144				C
Van Burck, Hans & Marianne	Star City	306-863-4377				C
SNOWHITE475						
Woods, Dale Arthur & June	Rocanville	306-645-4423			R	
SNOWSTAR						
Sudom, Blaine G. & Nathan	Avonlea	306-868-4620		F		
SOMERSET						
Pratchler, John & L. & M. & A.	Muenster	306-682-3317		F		C
Skorobohach, Frederick	Melville	306-786-6307			R	
SUPERB						
Carlson, Herbert E.P. & Leslie	Buchanan	306-592-4449				C
Clearwater, Don W.	Nipawin	306-862-3025				C
Dangstorp, Emil & Brian	Redvers	306-452-3444				C
Holland, Ernest W.	Rocanville	306-645-4223				C

Laxdal, G.M.; Blyth, D., Gregory, Wayne & Richard & Bolt, Glen A.	Wynyard	306-554-2078				C
Luck, Lorne C. & Landis	Tisdale	306-873-4111				C
Ostapovitch, F.G. & Glen	Theodore	306-647-2205			R	
Palmier, Maurice	Lafleche	306-472-5917				C
Reisner, Cecil & Barry	Limerick	306-263-2139			R	C
Rempel, Blair Allan	Nipawin	306-862-3573				C
Rude, Stanley	Naicam	306-874-2359		F		C
Shewchuk, Stan & Lorne & Terry	Krydor	306-497-2800				C
Trawin, Julie Ann	Melfort	306-752-4060			R	
Wylie, Leslie Dale	Biggar	306-948-5394				C
Zwingli, James Trent & Shelley	Melfort	306-752-4224				C
UNITY						
Secan Association	Kanata	613-592-8600	S			
WASKADA						
Secan Association	Kanata	613-592-8600	S	F		

WHEAT - WINTER

CDC BUTEO						
Amos, K. Wayne	Oxbow	306-483-2963	S	F		C
Boyes, Douglas J.	Kelvington	306-327-4980				C
Boyes, Thomas Alexander	Kelvington	306-327-4782				C
Bullock, Robert J.	Maidstone	306-893-4467				C
Carlson, Herbert E.P. & Leslie	Buchanan	306-592-4449			R	
Fedoruk, Rod M. & Cathy	Kamsack	306-542-4235		F		C
Gellner, Clayton S.	Southey	306-726-4323				C
Girodat, Gerald	Shaunavon	306-297-2913				C
Kaeding, Roger W. & Warren	Churchbridge	306-896-2236	S		R	
Leduc, Gerald R.	Assiniboia	306-642-3076			R	C
Lutzer, Albert & Latrace, Jim	Lumsden	306-731-2843			R	
Rude, Stanley	Naicam	306-874-2359				C
Sopatyk, Jeffery & Patti	Saskatoon	306-955-2516	S	F		C
CDC PTARMIGAN						
McDougall, Ken & Craig	Moose Jaw	306-693-3649	S	F		C
CDC RAPTOR						
Boyd, Clare W. & Dale A.	Melfort	306-752-2108			R	
Elmy, Robert W., Kevin & Christina	Saltcoats	306-744-2779	S	F	R	
Hardy, Allan W. & Dale & Evan	Grenfell	306-697-3128				C
Jones, Bradley	Wadena	306-338-2381			R	
Ostafie, Dave & Robert	Canora	306-563-6244			R	
MCCLINTOCK						
Mayerle, Kris	Tisdale	306-873-4261				C

CANOLA

1818						
Canterra Seeds Ltd.	Winnipeg	204-988-9750				C
Forster, Glenn M. & Patrick & Marthe	Lake Lenore	306-682-3485				C
South, Winston & Richard & Bradley	Melfort	306-752-9840				C
1847V						
Canterra Seeds Ltd.	Winnipeg	204-988-9750				C
32-75						
Monsanto Canada Inc.	Lethbridge	403-327-2411				C
34-55						
Monsanto Canada Inc.	Lethbridge	403-327-2411				C
34-65						
Monsanto Canada Inc.	Lethbridge	403-327-2411				C
72P01 CL						
Froese, Terrance P.	Rabbit Lake	306-824-2121				C
73P01 RR						
Froese, Terrance P.	Rabbit Lake	306-824-2121				C
811RR						
Brett-Young Seeds Limited	St. Norbert	204-261-7932				C

9551

Viterra	Saskatoon	800-565-7333			C

997 RR

Brett-Young Seeds Limited	St. Norbert	204-261-7932			C

ACS-C7

Seidle, E. & B. & C. & M.	Medstead	306-342-4377			C

CAFE

Fenton, Gerald A. & Robin Paul	Tisdale	306-873-5438			C
Secan Association	Kanata	613-592-8600			C

PRAIRIE 719RR

Brett-Young Seeds Limited	St. Norbert	204-261-7932			C

RUGBY

Ardell, Terrence Wade, Michael, Brad & Joanne	Vanscoy	306-668-4415			C
Greenshields, Grant & Jim & Callie	Semans	306-524-2155			C
Hofer, Lorne A.	Wilkie	306-843-2797	F		C
Secan Association	Kanata	613-592-8600	F		C

SP ARMADA

Viterra	Regina	306-569-4082			C

SP BANNER

Sperle, Bentley D. & Jody	Unity	306-228-3160			C
Viterra	Regina	306-569-4082			C

CANOLA - HIGH ERUCIC ACID

RED RIVER 1826

Hartl, Donald	Lake Lenore	306-368-2495			C
Viterra	Regina	306-569-4082			C

FLAX

AC WATSON

Viterra	Regina	306-569-4082			C

CDC ARRAS

Charabin, Dale Kenneth & Timothy V. & Ryan	North Battleford	306-445-2939		R	
Craswell, Raymond W.	Strasbourg	306-725-3236	S F		C
Fedoruk, Rod M. & Cathy	Kamsack	306-g-4235		R	
Hardy, Allan W. & Dale & Evan	Grenfell	306-697-3128			C

CDC BETHUNE

Altwasser, Rodney & Allen R. & Dean	Yellow Grass	306-465-2727			C
Amos, K. Wayne	Oxbow	306-483-2963			C
Berscheid, K.N. & B. & E.K. & S. & C. & Y.	Lake Lenore	306-368-2602			C
Dangstorp, Emil & Brian	Redvers	306-452-3444			C
Dutton, David H. & George	Paynton	306-895-4306		R	
Fenton, Gerald A. & Robin Paul	Tisdale	306-873-5438	F	R	
Floberg, Barry & Delana & Devin & Brandon	Shaunavon	306-297-2087		R	
Fritzler, Baine A., Brenda D. & Adam A.	Govan	306-484-4612	F	R	C
Garratt, Lyle C. & K.C.	Milestone	306-436-2178		R	C
Heavin, G. Harvey & G. Ryan	Melfort	306-752-4171		R	
Heggie, Robert Thomas	Leross	306-675-4920			C
Hyndman, Neil S.	Balcarres	306-334-2914			C
Kaeding, Roger W. & Warren	Churchbridge	306-896-2236			C
Kirkham, Daniel Grant & Fran & R.	Saltcoats	306-744-2542		R	
Klemmer, Richard	Nipawin	306-862-3874		R	
Lung Seeds Ltd.	Lake Lenore	306-368-2414			C
Mannle, Kenneth & Laurie	Moosomin	306-435-3411			C
McCarthy, Richard J. & Brent	Corning	306-224-4848			C
Noble, Garry	Mossbank	306-354-2679	F		C
Novak, Orrin	Kuroki	306-338-2021			C
Ostapovitch, F.G. & Glen	Theodore	306-647-2205		R	
Palik, Jack	Kipling	306-736-2618		R	
Rugg, Barry C. & Robert B.	Elstow	306-257-3638		R	
Sandercock, Eric M.	Balcarres	306-334-2958			C

Schiltroth, John Mark	Ridgedale	306-873-4967				C
Shewchuk, Stan & Lorne & Terry	Krydor	306-497-2800				C
Simpson, Greg J.	Moose Jaw	306-693-2132				C
Stirton, Brian James	Moose Jaw	306-693-2310				C
Stokke, Terry J. & Shane T.	Watrous	306-946-2566				C
Titman, David G. & Loa L.	Viscount	306-944-4236			R	
Trowell, Kenneth	Saltcoats	306-744-2687	S	F		C
Woroschuk, Andrew	Calder	306-742-4682				C

CDC MONS

Dell, Dennis & Bonnie A.	Dafoe	306-554-3117				C
Hardy, Brian & Calvin	Grenfell	306-697-3127				C

CDC SORREL

Allan, J. Garth	Corning	306-457-2729				C
Allan, John R. & John Garth	Corning	306-457-2629	S		R	C
Allan, John Richard	Corning	306-457-2729				C
Allan, Raymond N. & Ruth	Corning	306-224-4666				C
Berscheid, K.N. & B. & E.K. & S. & C. & Y.	Lake Lenore	306-368-2602				C
Bews Agrow Ltd.	Eatonia	306-967-2440				C
Carlson, Herbert E.P. & Leslie	Buchanan	306-592-4449				C
Dobson, Curtis & Alison	Rouleau	306-776-2500				C
Edwards, Lawrence R., Donna, Jeff & Mike	Nokomis	306-528-2140	S			
Eyolfson, Robert H.	Leslie	306-272-4624				C
Fedoruk, Rod M. & Cathy	Kamsack	306-542-4235				C
Fenton, Gerald A. & Robin Paul	Tisdale	306-873-5438	S	F		C
Fowler, Edith	Central Butte	306-796-4652				C
Fraser, Edward H. & Glen & Dale	Yarbo	306-745-3830		F		C
Fritzler, Baine A., Brenda D. & Adam A.	Govan	306-484-4612		F		C
Greenshields, Grant & Jim & Callie	Semans	306-524-2155		F		C
Heavin, G. Harvey & G. Ryan	Melfort	306-752-4171			R	
Heggie, Kyle Robert	Leross	306-675-4920				C
Hleck, Leo	Codette	306-862-5966				C
Hyndman, Glen	Balcarres	306-334-2914				C
Klym, Roy & Vern	Regina	306-543-5052				C
Laxdal, G.M.; Blyth, D., Gregory, Wayne & Richard & Bolt, Glen A.	Wynyard	306-554-2078	S	F		C
Leduc, Gerald R.	Assiniboia	306-642-3076				C
Lindsay, Robert Stewart	Assiniboia	306-642-5369				C
Lung Seeds Ltd.	Lake Lenore	306-368-2414		F		
Nell, Robin William	Francis	306-957-4236				C
Ostafie, Dave & Robert	Canora	306-563-6244	S			C
Otsig, Kevin Bradley	Watson	306-287-4133	S	F		
Palmier, Maurice	Lafleche	306-472-5917				C
Pastl, Glenn A.	Watson	306-287-4243				C
Radloff, Shelly Colleen	Melfort	306-752-4060	S	F		C
Reisner, Cecil & Barry	Limerick	306-263-2139	S	F		C
Rude, Stanley	Naicam	306-874-2359				C
Rugg, Barry C. & Robert B.	Elstow	306-257-3638				C
Shewchuk, Stan & Lorne & Terry	Krydor	306-497-2800	S			C
Trawin, Alan Ross, Mitchell, Ashton, Jennifer & Jessica	Melfort	306-752-4060	S			
Woroschuk, Andrew	Calder	306-742-4682				C
Yauck, Kevin Rodney	Govan	306-484-4555	S	F		C

MACBETH

Viterra	Saskatoon	800-565-7333	S	F	R	

PRAIRIE BLUE

Allan, Raymond N. & Ruth	Corning	306-224-4666			R	
Willner, Lorne E.	Davidson	306-567-4613				C

PRAIRIE THUNDER

Fedoruk, Rod M. & Cathy	Kamsack	306-542-4235		F		
Trowell, Leslie	Saltcoats	306-744-2684	S	F		

TAURUS

Mayerle, Erwin D.	Tisdale	306-873-4261				C
Trowell, Leslie	Saltcoats	306-744-2684		F	R	
Yauck, Kevin Rodney	Govan	306-484-4555			R	C

VIMY

Palmier, Maurice	Lafleche	306-472-5917				C

HEMP

FINOLA

Hemp Oil Canada Inc	Ste. Agathe	204-882-2480	F	R	C
Meier, Garry L.	Ridgedale	306-277-2110	F		

MUSTARD

CENTENNIAL

Besco Grain	Brunkild				C
Fritzler, Baine A., Brenda D. & Adam A.	Govan	306-484-4612	S F		C
Viterra	Saskatoon	800-565-7333		F	C
Viterra	Regina	306-569-4082	S F		

ANDANTE

Fritzler, Baine A., Brenda D. & Adam A.	Govan	306-484-4612	F		C

SOYBEANS

GAILLARD

Campbell, Hugh	Qu'Appelle	306-699-7123			C

LS0036RR

Elmy, Robert W., Kevin & Christina	Saltcoats	306-744-2779		R	C
Quarry Grain Commodities Inc.	Stonewall	204-467-8877		R	C

FABA BEAN

SNOWBIRD

Edwards, Lawrence R., Donna, Jeff & Mike	Nokomis	306-528-2140		R	
Johnson, Oscar Stuart	Margo	306-324-4315		R	
Kaeding, Roger W. & Warren	Churchbridge	306-896-2236		R	
Marshall, Larry	Shellbrook	306-747-2725		R	

TABOAR

Campbell, Hugh	Qu'Appelle	306-699-7123	F		
Terramax Holdings Corp.	Qu'Appelle			R	

PEAS

AGASSIZ

Clark, Shaun & Gilchrist, Armand & Gibbings, Neil	Rosetown	306-882-2058	F	R	
Greenshields, Grant & Jim & Callie	Semans	306-524-2155	F		
Pfeifer, Robert G.	Lemberg	306-335-2532	S F		
Veikle, Lorne A. & Carl E. & G. & J.	Cut Knife	306-398-4714	F		

CAMRY

Craswell, Raymond W.	Strasbourg	306-725-3236			C
Ostafie, Dave & Robert	Canora	306-563-6244			C

CDC BRONCO

Allan, Raymond N. & Ruth	Corning	306-224-4666	S F	R	
Ardell, Terrence Wade, Michael, Brad & Joanne	Vanscoy	306-668-4415		R	C
Boldt, Garry	Osler	306-239-2071			C
Bolt, Dale & Scott & Tod	Wynyard	306-554-2076			C
Brigden, Allan D., Drew & Devon	Kisbey	306-462-4813			C
Brown, Kyle	Prince Albert	306-922-0571	S F	R	
Cay, Randy D.	Kinistino	306-864-3696	S F	R	
Chapple, Floyd & Debbie	Grandora	306-329-4697			C
Denis, Michel P. & Marc	St. Denis	306-258-2075		R	
Fedoruk, Rod M. & Cathy	Kamsack	306-542-4235		R	
Fenton, Gerald A. & Robin Paul	Tisdale	306-873-5438	S F	R	
Forster, Glenn M. & Patrick & Marthe	Lake Lenore	306-682-3485		R	
Fritzler, Baine A., Brenda D. & Adam A.	Govan	306-484-4612		R	
Froese, Terrance P.	Rabbit Lake	306-824-2121		R	
Ganshorn, Allan W.	Regina	306-757-8328			C
Geall, Brian R.	Nipawin	306-862-9177		R	
Greenshields, Grant & Jim & Callie	Semans	306-524-2155			C

Hetland, Bill	Naicam	306-874-5694		F	R	
Hyndman, Neil S.	Balcarres	306-334-2914				C
Johnson, Oscar Stuart	Margo	306-324-4315				C
Kelly, Calvin	Regina	306-924-1988				C
Kemper, Russell & Donna	Fulda	306-682-4929				C
Kennett, Brian Guy	Manor	306-448-4813			R	
Klemmer, Richard	Nipawin	306-862-3874				C
Klym, Roy & Vern	Regina	306-543-5052				C
Labrecque, Roger & Claude	Saskatoon	306-373-9379			R	
Luck, Lorne C. & Landis	Tisdale	306-873-4111			R	C
Lung Seeds Ltd.	Lake Lenore	306-368-2414				C
Maxwell, David S.	Nipawin	306-862-9622	S	F	R	
Mayell, Harvey J. & Calvin J.	Congress	306-642-3120			R	
Mayerle, Bernhard C.	Tisdale	306-873-4267			R	C
Olson, Lyndon Ordon	Archerwill	306-323-4912				C
Reisner, Cecil & Barry	Limerick	306-263-2139		F	R	
Rempel, Blair Allan	Nipawin	306-862-3573			R	
Seymour, G.P, Donne, Kyle & Kelly & R. Thistlethwaite	Stewart Valley	306-778-2344			R	
Shymanski, Ronald Albert	Choiceland	306-428-2405		F	R	
Sopatyk, Jeffery & Patti	Saskatoon	306-955-2516	S		R	
South, Winston & Richard & Bradley	Melfort	306-752-9840			R	C
Sperle, Bentley D. & Jody	Unity	306-228-3160				C
Tebbutt, Ronald E. & Gregg	Nipawin	306-862-9730			R	
Trowell, Leslie	Saltcoats	306-744-2684		F	R	
Van Burck, Hans & Marianne	Star City	306-863-4377				C
Veikle, Lorne A. & Carl E. & G. & J.	Cut Knife	306-398-4714				C
Walker, Vincent C.	Melfort	306-863-4110				C
Warrington, John	Mervin	306-845-2642			R	
Willner, Lorne E.	Davidson	306-567-4613			R	
Winterhalt, Tim	Unity	306-228-3170				C
Wood, Leonard David	Wynyard	306-554-2932				C
Youzwa, Donald	Nipawin	306-862-5690	S	F	R	

CDC CENTENNIAL

Bailey, Roy G.	Milden	306-935-4702	S			
Berscheid, K.N. & B. & E.K. & S. & C. & Y.	Lake Lenore	306-368-2602	S			
Bews Agrow Ltd.	Eatonia	306-967-2440	S			
Cresswell, Gordon B. & Bryan & Mark	Tisdale	306-873-5360	S			
Fast, Walter J. & Linda	Kindersley	306-463-3626	S			
Fedoruk, Rod M. & Cathy	Kamsack	306-542-4235	S			
Garratt, Lyle C. & K.C.	Milestone	306-436-2178	S			
Geiger, Timothy	Leader	306-628-4335	S			
Lung Seeds Ltd.	Lake Lenore	306-368-2414	S			
Sanderson, Donald Stewart	Rosetown	306-882-3317		F		
Seymour, G.P, Donne, Kyle & Kelly & R. Thistlethwaite	Stewart Valley	306-778-2344	S			
Shewchuk, Stan & Lorne & Terry	Krydor	306-497-2800	S			
Simpson, Thomas H.	Moose Jaw	306-693-2132		F		
Sopatyk, Jeffery & Patti	Saskatoon	306-955-2516	S			
Sperle, Bentley D. & Jody	Unity	306-228-3160	S			
Tebbutt, Ronald E. & Gregg	Nipawin	306-862-9730	S			
Van Burck, Hans & Marianne	Star City	306-863-4377	S			
Watson, Wayne Donald & Calvin & Mark	Avonlea	306-868-2171	S			

CDC DUNDURN

Allan, J. Garth	Corning	306-457-2729	S			

CDC GOLDEN

Allan, J. Garth	Corning	306-457-2729				C
Allan, John R. & John Garth	Corning	306-457-2629	S	F	R	C
Allan, John Richard	Corning	306-457-2729				C
Amos, K. Wayne	Oxbow	306-483-2963	S		R	C
Annand, Glenn	Mossbank	306-354-7675			R	
Ardell, Terrence Wade, Michael, Brad & Joanne	Vanscoy	306-668-4415			R	C
Berscheid, K.N. & B. & E.K. & S. & C. & Y.	Lake Lenore	306-368-2602				C
Bews Agrow Ltd.	Eatonia	306-967-2440			R	C
Buziak, Ronald Charles	Mayfair	306-445-6556			R	
Carefoot, Floyd Martin	Swift Current	306-773-6963				C

Carefoot, Lorne R.	Swift Current	306-773-6970				C
Carlson, Herbert E.P. & Leslie	Buchanan	306-592-4449				C
Chapple, Floyd & Debbie	Grandora	306-329-4697				C
Clark, Shaun & Gilchrist, Armand & Gibbings, Neil	Rosetown	306-882-2058				C
Corbett, Dean & Trent	Macrorie	306-243-2047				C
Dangstorp, Emil & Brian	Redvers	306-452-3444				C
Edwards, Lawrence R., Donna, Jeff & Mike	Nokomis	306-528-2140				C
Fast, Walter J. & Linda	Kindersley	306-463-3626				C
Floberg, Barry & Delana & Devin & Brandon	Shaunavon	306-297-2087				C
Fritzler, Baine A., Brenda D. & Adam A.	Govan	306-484-4612				C
Garratt, Lyle C. & K.C.	Milestone	306-436-2178			R	
Hansen, James S.	Yellow Grass	306-465-2525				C
Heggie, Kyle Robert	Leross	306-675-4920				C
Heggie, Robert Thomas	Leross	306-675-4920				C
Herle, Raymond & Gregory R.	Wilkie	306-843-2934				C
Hundeby, R. & D. & R. & A. & K. & L. & Wonnick, Adam	Elbow	306-854-4629				C
Johnson, Oscar Stuart	Margo	306-324-4315				C
Kaeding, Roger W. & Warren	Churchbridge	306-896-2236			R	
Kemper, Kenneth W. & Armella	Humboldt	306-682-3570			R	
Kemper, Russell & Donna	Fulda	306-682-4929			R	
Kerber, Greg	Rosthern	306-232-4474			R	C
Klym, Roy & Vern	Regina	306-543-5052				C
Labrecque, Roger & Claude	Saskatoon	306-373-9379			R	
Laxdal, G.M.; Blyth, D., Gregory, Wayne & Richard & Bolt, Glen A.	Wynyard	306-554-2078			R	C
Leduc, Gerald R.	Assiniboia	306-642-3076				C
Lung Seeds Ltd.	Lake Lenore	306-368-2414				C
Lutzer, Albert & Latrace, Jim	Lumsden	306-731-2843				C
Mattus, Ronald	Chaplin	306-395-2652				C
Mayerle, Erwin D.	Tisdale	306-873-4261			R	C
McDougall, Ken & Craig	Moose Jaw	306-693-3649			R	
Nakonechny, Peter, Don P., Joyce, Coral & Lance	Ruthilda	306-932-4409			R	
Reisner, Cecil & Barry	Limerick	306-263-2139	S	F		C
Rennick, Joe R. & William J.	Milestone	306-436-4353		F		
Rogg, Paul A.	Pennant	306-626-3236				C
Sanderson, Barbara J.	Rosetown	306-882-3317				C
Sanderson, Travis	Rosetown	306-882-3150				C
Seymour, G.P, Donne, Kyle & Kelly & R. Thistlethwaite	Stewart Valley	306-778-2344	S			C
Smith, Ron T.W. & Barb A.	Limerick	306-263-4944				C
Smith, Wayne D.	Limerick	306-263-2144				C
Sopatyk, Jeffery & Patti	Saskatoon	306-955-2516	S		R	
Stauber, Clayton & Lori	Stewart Valley	306-773-7907			R	C
Straub, Lorne A.	Pense	306-345-2390				C
Travland, Glenn & Marie	Coronach	306-267-4916				C
Travland, Norman & Lureen & Kevin	Coronach	306-267-4923	S	F	R	C
Trawin, Debra Ann	Melfort	306-752-4060	S	F	R	
Veikle, Lorne A. & Carl E. & G. & J.	Cut Knife	306-398-4714				C
Woods, Dale Arthur & June	Rocanville	306-645-4423				C
Yauck, Kevin Rodney	Govan	306-484-4555				C
CDC HANDEL						
Henne, Albert Clarence	Kelfield	306-932-4806				C
CDC MEADOW						
Ardell, Terrence Wade, Michael, Brad & Joanne	Vanscoy	306-668-4415		F		
Bailey, Roy G.	Milden	306-935-4702		F		
Berscheid, K.N. & B. & E.K. & S. & C. & Y.	Lake Lenore	306-368-2602	S	F		
Bews Agrow Ltd.	Eatonia	306-967-2440		F		
Bruce, Vic R.	Tuxford	306-693-2044		F		
Clark, Shaun & Gilchrist, Armand & Gibbings, Neil	Rosetown	306-882-2058		F		
Cresswell, Gordon B. & Bryan & Mark	Tisdale	306-873-5360		F		
Denis, Michel P. & Marc	St. Denis	306-258-2075		F		

Dutton, David H. & George	Paynton	306-895-4306	S	F		
Edwards, Lawrence R., Donna, Jeff & Mike	Nokomis	306-528-2140	S			
Fast, Walter J. & Linda	Kindersley	306-463-3626		F		
Fedoruk, Rod M. & Cathy	Kamsack	306-542-4235		F		
Fenton, Gerald A. & Robin Paul	Tisdale	306-873-5438	S	F		
Ganshorn, Allan W.	Regina	306-757-8328	S	F		
Geall, Brian R.	Nipawin	306-862-9177		F		
Girodat, Gerald	Shaunavon	306-297-2913		F		
Greenshields, Grant & Jim & Callie	Semans	306-524-2155		F		
Heavin, Larry N. & L. Warren	Melfort	306-752-4020	S			
Heavin, Milton Russell	Melfort	306-752-4071	S	F		
Herle, Raymond & Gregory R.	Wilkie	306-843-2934		F		
Hetland, Bill	Naicam	306-874-5694	S	F		
Hundeby, R. & D. & R. & A. & K. & L. & Wonnick, Adam	Elbow	306-854-4629		F		
Kaeding, Roger W. & Warren	Churchbridge	306-896-2236		F		
Klemmer, Richard	Nipawin	306-862-3874		F		
Laxdal, G.M.; Blyth, D., Gregory, Wayne & Richard & Bolt, Glen A.	Wynyard	306-554-2078	S	F		
Littman, Larry W. & Allan B. & L.R.	Saltcoats	306-783-6518	S	F		
Lung Seeds Ltd.	Lake Lenore	306-368-2414		F		
Lung, Ivan & Schemenauer, S. & B.;	Lake Lenore	306-368-2414		F		
Marcil, Harvey G. & Brent Louis	Moose Jaw	306-694-2981		F		
Mayerle, Bernhard C.	Tisdale	306-873-4267		F		
Mayerle, Erwin D.	Tisdale	306-873-4261	S	F		
Mayerle, Garry D.	Tisdale	306-873-5993		F		
Reisner, Cecil & Barry	Limerick	306-263-2139	S	F		
Rude, Stanley	Naicam	306-874-2359		F		
Sanderson, Barbara J.	Rosetown	306-882-3317		F		
Seymour, G.P, Donne, Kyle & Kelly & R. Thistlethwaite	Stewart Valley	306-778-2344				R
Simpson, John W.	Moose Jaw	306-693-2132				R
Sopatyk, Jeffery & Patti	Saskatoon	306-955-2516	S	F	R	
South, Winston & Richard & Bradley	Melfort	306-752-9840		F		
Tebbutt, Ronald E. & Gregg	Nipawin	306-862-9730	S	F		
Trawin, Alan Ross, Mitchell, Ashton, Jennifer & Jessica	Melfort	306-752-4060	S	F		
Trawin, Brent John	Melfort	306-752-4060	S			
Van Burck, Hans & Marianne	Star City	306-863-4377	S			
Veikle, Lorne A. & Carl E. & G. & J.	Cut Knife	306-398-4714		F		
Wakefield, Monica & Laurie Garland	Maidstone	306-893-2984	S	F		
Walker, Vincent C.	Melfort	306-863-4110		F		
Watson, Wayne Donald & Calvin & Mark	Avonlea	306-868-2171		F		
Youzwa, Donald	Nipawin	306-862-5690	S	F		
CDC MINUET						
McDougall, Ken & Craig	Moose Jaw	306-693-3649				C
CDC MONTERO						
Sperle, Bentley D. & Jody	Unity	306-228-3160			R	
CDC MOZART						
Heavin, Milton Russell	Melfort	306-752-4071				C
Klym, Roy & Vern	Regina	306-543-5052				C
CDC ROCKET						
Bailey, Roy G.	Milden	306-935-4702		F		
Greenshields, Grant & Jim & Callie	Semans	306-524-2155		F		
Herle, Raymond & Gregory R.	Wilkie	306-843-2934		F		
CDC SAGE						
Amos, K. Wayne	Oxbow	306-483-2963	S	F		
Anderson, Trevor Ward	Frontier	306-296-2104			R	
Annand, Glenn	Mossbank	306-354-7675			R	
Ardell, Terrence Wade, Michael, Brad & Joanne	Vanscoy	306-668-4415			R	
Bailey, Roy G.	Milden	306-935-4702			R	

Baxter, Barry Arnold	Codette	306-862-5723			R	
Berscheid, K.N. & B. & E.K. & S. & C. & Y.	Lake Lenore	306-368-2602		F	R	
Clark, Shaun & Gilchrist, Armand & Gibbings, Neil	Rosetown	306-882-2058		F		
Cresswell, Gordon B. & Bryan & Mark	Tisdale	306-873-5360	S			C
Dutton, David H. & George	Paynton	306-895-4306	S	F		
Fraser, Edward H. & Glen & Dale	Yarbo	306-745-3830			R	
Gregoire, Denis	North Battleford	306-445-5516			R	
Hansen, James S.	Yellow Grass	306-465-2525			R	
Herle, Raymond & Gregory R.	Wilkie	306-843-2934			R	
Hetland, Bill	Naicam	306-874-5694			R	
Hleck, Leo	Codette	306-862-5966	S	F	R	
Hleck, Lloyd G.	Codette	306-862-5966			R	
Hundeby, R. & D. & R. & A. & K. & L. & Wonnick, Adam	Elbow	306-854-4629			R	
Laxdal, G.M.; Blyth, D., Gregory, Wayne & Richard & Bolt, Glen A.	Wynyard	306-554-2078	S	F	R	
Lutzer, Albert & Latrace, Jim	Lumsden	306-731-2843			R	
Mayerle, Bernhard C.	Tisdale	306-873-4267			R	
Medernach, Louis J. & Kim L.	Cudworth	306-256-3398			R	
Petruic, Cameron L., Judy & Nick	Avonlea	306-868-2294	S	F	R	
Reisner, Cecil & Barry	Limerick	306-263-2139		F	R	
Rude, Stanley	Naicam	306-874-2359			R	
Rugg, Barry C. & Robert B.	Elstow	306-257-3638		F	R	
Simpson, John W.	Moose Jaw	306-693-2132			R	
Sopatyk, Jeffery & Patti	Saskatoon	306-955-2516	S	F	R	
Veikle, Lorne A. & Carl E. & G. & J.	Cut Knife	306-398-4714			R	
Watson, Wayne Donald & Calvin & Mark	Avonlea	306-868-2171			R	

CDC STRIKER

Berscheid, K.N. & B. & E.K. & S. & C. & Y.	Lake Lenore	306-368-2602				C
Dutton, David H. & George	Paynton	306-895-4306				C
Gregoire, Denis	North Battleford	306-445-5516			R	C
Lung Seeds Ltd.	Lake Lenore	306-368-2414	S	F	R	
Medernach, Louis J. & Kim L.	Cudworth	306-256-3398				C
Meyer, Ward	Lake Lenore	306-368-2635				C
Rude, Stanley	Naicam	306-874-2359				C
Shewchuk, Stan & Lorne & Terry	Krydor	306-497-2800				C
Slind, Donald Edward	Archerwill	306-323-4927				C
Woods, Dale Arthur & June	Rocanville	306-645-4423			R	

CDC TUCKER

Annand, Glenn	Mossbank	306-354-7675		F		
Bailey, Roy G.	Milden	306-935-4702		F		
Boldt, Garry	Osler	306-239-2071		F		
Dutton, David H. & George	Paynton	306-895-4306		F		
Girodat, Gerald	Shaunavon	306-297-2913		F		
Greenshields, Grant & Jim & Callie	Semans	306-524-2155		F		
Kaeding, Roger W. & Warren	Churchbridge	306-896-2236		F		
Laxdal, G.M.; Blyth, D., Gregory, Wayne & Richard & Bolt, Glen A.	Wynyard	306-554-2078	S	F		
Seymour, G.P, Donne, Kyle & Kelly & R. Thistlethwaite	Stewart Valley	306-778-2344		F		
Sopatyk, Jeffery & Patti	Saskatoon	306-955-2516	S		R	
Van Burck, Hans & Marianne	Star City	306-863-4377		F		

COOPER

Annand, Glenn	Mossbank	306-354-7675			R	
Clark, Shaun & Gilchrist, Armand & Gibbings, Neil	Rosetown	306-882-2058				C
Greenshields, Grant & Jim & Callie	Semans	306-524-2155				C
Hyndman, David	Balcarres	306-334-2914				C
Johnson, Oscar Stuart	Margo	306-324-4315				C
Kaeding, Roger W. & Warren	Churchbridge	306-896-2236				C
Labrecque, Roger & Claude	Saskatoon	306-373-9379				C
Lung Seeds Ltd.	Lake Lenore	306-368-2414				C
Novak, Orrin	Kuroki	306-338-2021		F		C

Pfeifer, Robert G.	Lemberg	306-335-2532				C
Veikle, Lorne A. & Carl E. & G. & J.	Cut Knife	306-398-4714	S			C
Walker, Vincent C.	Melfort	306-863-4110				C
Yauck, Kevin Rodney	Govan	306-484-4555				C

CUTLASS

Beuker, Allan Daniel	Melfort	306-863-2225			R	C
Bolt, Dale & Scott & Tod	Wynyard	306-554-2076			R	
Carlson, Herbert E.P. & Leslie	Buchanan	306-592-4449				C
Heavin, Larry N. & L. Warren	Melfort	306-752-4020			R	C
Rempel, Blair Allan	Nipawin	306-862-3573				C
Sperle, Bentley D. & Jody	Unity	306-228-3160				C
Wakefield, Kristopher	Maidstone	306-893-2527			R	C
Wakefield, Monica & Laurie Garland	Maidstone	306-893-2984			R	C
Winterhalt, Tim	Unity	306-228-3170				C

DS-ADMIRAL

Boyd, Clare W. & Dale A.	Melfort	306-752-2108				C
Buziak, Ronald Charles	Mayfair	306-445-6556				C
Cay, Randy D.	Kinistino	306-864-3696	S	F	R	
Charabin, Dale Kenneth & Timothy V. & Ryan	North Battleford	306-445-2939				C
Froese, Terrance P.	Rabbit Lake	306-824-2121			R	
Geall, Brian R.	Nipawin	306-862-9177				C
Hetland, Bill	Naicam	306-874-5694				C
Hyndman, David	Balcarres	306-334-2914				C
Hyndman, Glen	Balcarres	306-334-2914				C
Ostafie, Dave & Robert	Canora	306-563-6244				C
Tebbutt, Ronald E. & Gregg	Nipawin	306-862-9730				C
Weightman, Brian	Rosthern	306-232-5588				C
Wilfing, Raymond John & Ryan John	Meadow Lake	306-236-6811				C

ECLIPSE

Calcutt, Clifford W.	Lemberg	306-335-2860				C
Edwards, Lawrence R., Donna, Jeff & Mike	Nokomis	306-528-2140			R	
McCarthy, Richard J. & Brent	Corning	306-224-4848				C
Palmier, Maurice	Lafleche	306-472-5917				C
Trowell, Leslie	Saltcoats	306-744-2684		F	R	

MFR042

Walker, Vincent C.	Melfort	306-863-4110			R	

MFR043

Walker, Vincent C.	Melfort	306-863-4110			R	

MFR071

Walker, Vincent C.	Melfort	306-863-4110		F		

MFS041

Walker, Vincent C.	Melfort	306-863-4110			R	

NOBLE

Bailey, Roy G.	Milden	306-935-4702		F	R	
Froese, Terrance P.	Rabbit Lake	306-824-2121	S			
Kaeding, Roger W. & Warren	Churchbridge	306-896-2236	S			
Ostafie, Dave & Robert	Canora	306-563-6244	S			
Reisner, Cecil & Barry	Limerick	306-263-2139	S	F		
Woods, Dale Arthur & June	Rocanville	306-645-4423		F		

POLSTEAD

Blenkin, Leonard G. & Larry K.	Sintaluta	306-727-2222		F		
Edwards, Lawrence R., Donna, Jeff & Mike	Nokomis	306-528-2140	S			
Fedoruk, Rod M. & Cathy	Kamsack	306-542-4235			R	
Heenan, Thomas Dale & Deb.	Regina	306-522-9375				C
Laxdal, G.M.; Blyth, D., Gregory, Wayne & Richard & Bolt, Glen A.	Wynyard	306-554-2078	S		R	C
Needham, Reginald R.	Oxbow	306-483-5052				C
Sayers, Charlie Joseph	Delmas	306-445-6522				C
Trowell, Leslie	Saltcoats	306-744-2684			R	
Van Burck, Hans & Marianne	Star City	306-863-4377	S	F	R	
Wilfing, Raymond John & Ryan John	Meadow Lake	306-236-6811			R	

REWARD

Fedoruk, Rod M. & Cathy	Kamsack	306-542-4235			R	
Shewchuk, Stan & Lorne & Terry	Krydor	306-497-2800			R	

SORENTO

Charabin, Dale Kenneth & Timothy V. & Ryan	North Battleford	306-445-2939	S			
Trowell, Leslie	Saltcoats	306-744-2684	S	F		
Woods, Dale Arthur & June	Rocanville	306-645-4423		F		
Yauck, Kevin Rodney	Govan	306-484-4555	S			

SW CIRCUS

Heavin, Larry N. & L. Warren	Melfort	306-752-4020	S	F		

SW MARQUEE

Viterra	Regina	306-569-4082	S	F	R	C

SW MIDAS

Denis, Michel P. & Marc	St. Denis	306-258-2075			C
Girodat, Gerald	Shaunavon	306-297-2913			C
Laxdal, G.M.; Blyth, D., Gregory, Wayne & Richard & Bolt, Glen A.	Wynyard	306-554-2078			C
Lueke, Dennis	Humboldt	306-682-5170			C
Trowell, Leslie	Saltcoats	306-744-2684		R	
Wilfing, Raymond John & Ryan John	Meadow Lake	306-236-6811			C

SW SERGEANT

Herle, Raymond & Gregory R.	Wilkie	306-843-2934			C
Pfeifer, Robert G.	Lemberg	306-335-2532			C

TAMORA

Blenkin, Leonard G. & Larry K.	Sintaluta	306-727-2222		F		
Brigden, Allan D., Drew & Devon	Kisbey	306-462-4813				C
Froese, Terrance P.	Rabbit Lake	306-824-2121		F	R	
McCarthy, Richard J. & Brent	Corning	306-224-4848		F		
Smith, Ron T.W. & Barb A.	Limerick	306-263-4944			R	
Veikle, Lorne A. & Carl E. & G. & J.	Cut Knife	306-398-4714			R	
Woods, Dale Arthur & June	Rocanville	306-645-4423		F		

THUNDERBIRD

Berscheid, K.N. & B. & E.K. & S. & C. & Y.	Lake Lenore	306-368-2602		F		
Greenshields, Grant & Jim & Callie	Semans	306-524-2155	S			
Trowell, Leslie	Saltcoats	306-744-2684	S	F		

TRAPPER

Meier, Garry L.	Ridgedale	306-277-2110	S		R	C

TUDOR

Hardy, Allan W. & Dale & Evan	Grenfell	306-697-3128			C

CHICKPEA - DESI

CDC CABRI

Annand, Glenn	Mossbank	306-354-7675	S		C

CDC VANGUARD

Annand, Glenn	Mossbank	306-354-7675	S	F	
Forer, Tim & Denise	Avonlea	306-868-4433	S		

CHICKPEA - KABULI

CDC CHICO

Straub, Lorne A.	Pense	306-345-2390			C

CDC FRONTIER

Annand, Glenn	Mossbank	306-354-7675	S	F	R	
Hundeby, R. & D. & R. & A. & K. & L. & Wonnick, Adam	Elbow	306-854-4629			R	C
Leduc, Gerald R.	Assiniboia	306-642-3076				C
Marcil, Harvey G. & Brent Louis	Moose Jaw	306-694-2981	S	F		C
Mattus, Ronald	Chaplin	306-395-2652				C
Reisner, Cecil & Barry	Limerick	306-263-2139	S	F	R	C
Simpson, John W.	Moose Jaw	306-693-2132			R	
Sopatyk, Jeffery & Patti	Saskatoon	306-955-2516			R	
Travland, Glenn & Marie	Coronach	306-267-4916				C
Travland, Norman & Lureen & Kevin	Coronach	306-267-4923	S	F	R	C
Yuke, Blair	Moose Jaw	306-691-0085				C

CDC LUNA

Annand, Glenn	Mossbank	306-354-7675	S			
Bruce, Vic R.	Tuxford	306-693-2044	S			
Dunnington, Douglas	Swift Current	306-773-9748	S			
Geiger, Timothy	Leader	306-628-4335	S			
Hundeby, R. & D. & R. & A. & K. & L. & Wonnick, Adam	Elbow	306-854-4629	S			
Marcil, Harvey G. & Brent Louis	Moose Jaw	306-694-2981	S			
McDougall, Ken & Craig	Moose Jaw	306-693-3649	S			
Reisner, Cecil & Barry	Limerick	306-263-2139	S			
Renwick, Douglas Dale	Milestone	306-436-4418		F		
Seymour, G.P, Donne, Kyle & Kelly & R. Thistlethwaite	Stewart Valley	306-778-2344	S			
Simpson, Thomas H.	Moose Jaw	306-693-2132	S			
Sopatyk, Jeffery & Patti	Saskatoon	306-955-2516	S			
Stirton, Brian James	Moose Jaw	306-693-2310	S			

LENTIL - LARGE GREEN

CDC GREENLAND

Annand, Glenn	Mossbank	306-354-7675	S	F		
Bailey, Roy G.	Milden	306-935-4702		F		
Bews Agrow Ltd.	Eatonia	306-967-2440	S	F		
Bruce, Vic R.	Tuxford	306-693-2044		F		
Clark, Shaun & Gilchrist, Armand & Gibbings, Neil	Rosetown	306-882-2058	S			
Fast, Walter J. & Linda	Kindersley	306-463-3626		F		
Garratt, Lyle C. & K.C.	Milestone	306-436-2178		F		
Hansen, James S.	Yellow Grass	306-465-2525	S			
Hundeby, R. & D. & R. & A. & K. & L. & Wonnick, Adam	Elbow	306-854-4629			F	
Lutzer, Albert & Latrace, Jim	Lumsden	306-731-2843			F	
Marcil, Harvey G. & Brent Louis	Moose Jaw	306-694-2981			F	
McDougall, Ken & Craig	Moose Jaw	306-693-3649	S			
Nakonechny, Peter, Don P., Joyce, Coral & Lance	Ruthilda	306-932-4409	S	F		
Reisner, Cecil & Barry	Limerick	306-263-2139	S	F		
Rennick, Joe R. & William J.	Milestone	306-436-4353	S			
Renwick, Douglas Dale	Milestone	306-436-4418	S			
Sanderson, Donald Stewart	Rosetown	306-882-3317				R
Seymour, G.P, Donne, Kyle & Kelly & R. Thistlethwaite	Stewart Valley	306-778-2344	S	F	R	
Simpson, Jamie	Moose Jaw	306-693-2132	S			R
Smith, Wayne D.	Limerick	306-263-2144		F		
Sopatyk, Jeffery & Patti	Saskatoon	306-955-2516	S			R
Stirton, Brian James	Moose Jaw	306-693-2310		F		
Watson, Wayne Donald & Calvin & Mark	Avonlea	306-868-2171	S			
Willner, Lorne E.	Davidson	306-567-4613	S			

CDC IMPROVE

Altwasser, Rodney & Allen R. & Dean	Yellow Grass	306-465-2727		F	
Bruce, Vic R.	Tuxford	306-693-2044		F	
Fast, Walter J. & Linda	Kindersley	306-463-3626		F	
Garratt, Lyle C. & K.C.	Milestone	306-436-2178		F	
Greenshields, Grant & Jim & Callie	Semans	306-524-2155		F	
Hansen, James S.	Yellow Grass	306-465-2525		F	
Leduc, Gerald R.	Assiniboia	306-642-3076		F	
Lutzer, Albert & Latrace, Jim	Lumsden	306-731-2843		F	
Marcil, Harvey G. & Brent Louis	Moose Jaw	306-694-2981		F	
Murray, Scott & Ross	Young	306-259-4944		F	
Nakonechny, Peter, Don P., Joyce, Coral & Lance	Ruthilda	306-932-4409	S	F		
Reisner, Cecil & Barry	Limerick	306-263-2139	S	F		
Rennick, Joe R. & William J.	Milestone	306-436-4353	S			
Renwick, Douglas Dale	Milestone	306-436-4418	S			
Rugg, Barry C. & Robert B.	Elstow	306-257-3638		F		
Sanderson, Donald Stewart	Rosetown	306-882-3317				R
Schmeling, Donald H.	Riceton	306-738-2064	S			
Seymour, G.P, Donne, Kyle & Kelly & R. Thistlethwaite	Stewart Valley	306-778-2344		F		

Simpson, Tyler	Moose Jaw	306-693-2132		F	R	
Sopatyk, Jeffery & Patti	Saskatoon	306-955-2516	S	F		
Stirton, Brian James	Moose Jaw	306-693-2310		F		
Sudom, Blaine G. & Nathan	Avonlea	306-868-4620		F		
Watson, Wayne Donald & Calvin & Mark	Avonlea	306-868-2171		F		

CDC PLATO

Annand, Glenn	Mossbank	306-354-7675		F	R	
Bailey, Roy G.	Milden	306-935-4702				C
Fast, Walter J. & Linda	Kindersley	306-463-3626				C
Garratt, Lyle C. & K.C.	Milestone	306-436-2178				C
Girardin, Gaetan	Meyronne	306-264-5146				C
Hundeby, R. & D. & R. & A. & K. & L. & Wonnick, Adam	Elbow	306-854-4629				C
Klym, Roy & Vern	Regina	306-543-5052				C
Lutzer, Albert & Latrace, Jim	Lumsden	306-731-2843				C
Mattus, Ronald	Chaplin	306-395-2652				C
McKinnon, Ronald R.	Abernethy	306-332-3891				C
Parson, Ken	Elrose	306-574-2044				C
Petruic, Cameron L., Judy & Nick	Avonlea	306-868-2294	S	F	R	
Reisner, Cecil & Barry	Limerick	306-263-2139				C
Stirton, Brian James	Moose Jaw	306-693-2310				C
Watson, Wayne Donald & Calvin & Mark	Avonlea	306-868-2171				C
Yuke, Blair	Moose Jaw	306-691-0085				C

CDC SEDLEY

Rennick, Joe R. & William J.	Milestone	306-436-4353			R	

CDC SOVEREIGN

Seymour, G.P, Donne, Kyle & Kelly & R. Thistlethwaite	Stewart Valley	306-778-2344				C

LENTIL - MEDIUM GREEN

CDC METEOR

Annand, Glenn	Mossbank	306-354-7675			R	
Beck, Gregor	Rouleau	306-776-2432				C
Farley, William M. & James P.	Grand Coulee	306-757-6844			R	
Greenshields, Grant & Jim & Callie	Semans	306-524-2155			R	
Hundeby, R. & D. & R. & A. & K. & L. & Wonnick, Adam	Elbow	306-854-4629			R	
Reisner, Cecil & Barry	Limerick	306-263-2139			R	
Sanderson, Donald Stewart	Rosetown	306-882-3317			R	
Simpson, Jamie	Moose Jaw	306-693-2132				C
Smith, Wayne D.	Limerick	306-263-2144			R	
Stirton, Brian James	Moose Jaw	306-693-2310			R	

LENTIL - SMALL GREEN

CDC VICEROY

Bailey, Roy G.	Milden	306-935-4702				C
Baxter, Daniel J.H.	North Battleford	306-445-5414			R	
Garratt, Lyle C. & K.C.	Milestone	306-436-2178			R	
Hansen, James S.	Yellow Grass	306-465-2525			R	
Heenan, Thomas Dale & Deb.	Regina	306-522-9375				C
Heenan, William D. & E.H.	Regina	306-757-8493				C
Lutzer, Albert & Latrace, Jim	Lumsden	306-731-2843				C
McDougall, Ken & Craig	Moose Jaw	306-693-3649	S	F		C
Reisner, Cecil & Barry	Limerick	306-263-2139				C
Rennick, Joe R. & William J.	Milestone	306-436-4353			R	
Rogg, Paul A.	Pennant	306-626-3236				C
Sanderson, Barbara J.	Rosetown	306-882-3317				C
Seymour, G.P, Donne, Kyle & Kelly & R. Thistlethwaite	Stewart Valley	306-778-2344			R	
Simcoe Agservices Inc.	Swift Current	306-773-0803				C
Simpson, Trevor W.	Moose Jaw	306-693-2132			R	
Smith, Ron T.W. & Barb A.	Limerick	306-263-4944				C
Sudom, Blaine G. & Nathan	Avonlea	306-868-4620			R	
Watson, Wayne Donald & Calvin & Mark	Avonlea	306-868-2171			R	

LENTIL - PLOW DOWN TYPE

INDIAN HEAD

Farley, William M. & James P.	Grand Coulee	306-757-6844				C

LENTIL - RED

CDC ROULEAU

Ardell, Terrence Wade, Michael, Brad & Joanne	Vanscoy	306-668-4415			R	
Dobson, Curtis & Alison	Rouleau	306-776-2500				C
Fast, Walter J. & Linda	Kindersley	306-463-3626			R	
Fraser, Scott & Shawn	Pambrun	306-582-2148				C
Lindsay, Robert Stewart	Assiniboia	306-642-5369				C
Sanderson, Barbara J.	Rosetown	306-882-3317				C
Stauber, Clayton & Lori	Stewart Valley	306-773-7907				C
Willner, Lorne E.	Davidson	306-567-4613				C
Yauck, Kevin Rodney	Govan	306-484-4555			R	

LENTIL - SMALL RED

CDC IMPACT

Altwasser, Rodney & Allen R. & Dean	Yellow Grass	306-465-2727				C
Amos, K. Wayne	Oxbow	306-483-2963				C
Barlow, Bradley L.	Griffin	306-842-6216				C
Corbett, Dean & Trent	Macrorie	306-243-2047				C
Craswell, Raymond W.	Strasbourg	306-725-3236	S	F		
Denis, Michel P. & Marc	St. Denis	306-258-2075			R	
Fast, Walter J. & Linda	Kindersley	306-463-3626		F		C
Fraser, Scott & Shawn	Pambrun	306-582-2148				C
Gizen, Jason	Prelate	306-673-2687				C
Hansen, James S.	Yellow Grass	306-465-2525		F		C
Lindsay, Robert Stewart	Assiniboia	306-642-5369				C
Lutzer, Albert & Latrace, Jim	Lumsden	306-731-2843				C
Mayell, Harvey J. & Calvin J.	Congress	306-642-3120				C
Mayerle, Garry D.	Tisdale	306-873-5993				C
Nakonechny, Peter, Don P., Joyce, Coral & Lance	Ruthilda	306-932-4409		F		
Reisner, Cecil & Barry	Limerick	306-263-2139				C
Sandercock, Eric M.	Balcarres	306-334-2958				C
Schmeling, Donald H.	Riceton	306-738-2064				C
Schumacher, Mark	Delisle	306-493-2937				C
Siemens, Carl	Rush Lake	306-784-2811				C
Simpson, John W.	Moose Jaw	306-693-2132				C
Smith, Wayne D.	Limerick	306-263-2144		F		C
Sopatyk, Jeffery & Patti	Saskatoon	306-955-2516				C
Stirton, Brian James	Moose Jaw	306-693-2310				C
Straub, Lorne A.	Pense	306-345-2390				C
Van Burck, Hans & Marianne	Star City	306-863-4377	S		R	
Watson, Wayne Donald & Calvin & Mark	Avonlea	306-868-2171				C

CDC IMPERIAL

Beck, Gregor	Rouleau	306-776-2432		F	R	
Brown, Travis	Loreburn	306-644-4644				C
Bryant, Lee & Phyl & Vern & Carol	Battleford	306-937-3565			R	
Clark, Shaun & Gilchrist, Armand & Gibbings, Neil	Rosetown	306-882-2058			R	
Dutton, David H. & George	Paynton	306-895-4306			R	
Fast, Walter J. & Linda	Kindersley	306-463-3626		F		C
Hansen, James S.	Yellow Grass	306-465-2525		F		C
Murray, Scott & Ross	Young	306-259-4944		F		C
Sanderson, Travis	Rosetown	306-882-3150				C
Simpson, Tyler	Moose Jaw	306-693-2132				C
Smith, Ron T.W. & Barb A.	Limerick	306-263-4944		F		
Stirton, Brian James	Moose Jaw	306-693-2310				C
Straub, Lorne A.	Pense	306-345-2390				C
Watson, Wayne Donald & Calvin & Mark	Avonlea	306-868-2171				C
Yauck, Kevin Rodney	Govan	306-484-4555		F		

CDC REDBERRY

Clark, Shaun & Gilchrist, Armand & Gibbings, Neil	Rosetown	306-882-2058				C
Corbett, Dean & Trent	Macrorie	306-243-2047				C
Craswell, Raymond W.	Strasbourg	306-725-3236				C
Floberg, Barry & Delana & Devin & Brandon	Shaunavon	306-297-2087				C

Fraser, Scott & Shawn	Pambrun	306-582-2148			C
Froese, Terrance P.	Rabbit Lake	306-824-2121			C
Gregoire, Denis	North Battleford	306-445-5516			C
Hundeby, R. & D. & R. & A. & K. & L. & Wonnick, Adam	Elbow	306-854-4629			C
McDougall, Ken & Craig	Moose Jaw	306-693-3649		R	
Petruic, Cameron L., Judy & Nick	Avonlea	306-868-2294	S	F	
Sanderson, Everett D. & Wanda	Rosetown	306-882-3371			C
CDC ROBIN					
Tanner, David A. & Hazel	Regina	306-757-7012			C
CDC ROSETOWN					
Carefoot, Lorne R.	Swift Current	306-773-6970			C
Clark, Shaun & Gilchrist, Armand & Gibbings, Neil	Rosetown	306-882-2058			C
Gregoire, Denis	North Battleford	306-445-5516		R	
Hansen, James S.	Yellow Grass	306-465-2525		R	
Sopatyk, Jeffery & Patti	Saskatoon	306-955-2516		R	

ALFALFA

4.2					
Interlake Forage Seeds Ltd.	Fisher Branch	204-372-6920			C
421					
Northstar Seed Ltd.	Neepawa	204-476-5241			C
53V52					
Pioneer Hi-Bred International Inc.	Brooks	403-362-3963			C
AC BLUE J					
Bjornson, Gregory P.	Wynyard	306-554-3302			C
AC BRADOR					
Northstar Seed Ltd.	Neepawa	204-476-5241		F	C
AC CARIBOU					
Brett-Young Seeds Limited	St. Norbert	204-261-7932			C
Eggerman, Percy A.	Watson	306-287-3780			C
AC GRAZELAND BR					
Espenant, David	Hudson Bay	306-865-3077			C
Viterra	Regina	306-569-4082			C
AC LONGVIEW					
Farmpure Seeds	Regina	306-791-0500		F	C
AC NORDICA					
Gourley, Bruce D.	Watson	306-287-3127			C
Viterra	Regina	306-569-4082			C
ACCEL					
Brett-Young Seeds Limited	St. Norbert	204-261-7932		F	C
ALGONQUIN					
Cay, Norman Maurice	Tisdale	306-873-5527			C
Farmpure Seeds	Regina	306-791-0500			C
Favreau, Bernard M.	Prince Albert	306-763-8821			C
Gruszka, John Michael	Prince Albert	306-764-2458			C
Gullacher, Evan	Imperial	306-963-2511			C
Le Bras, Terence & Mart	Arborfield	306-769-8814			C
Malberg, Rod C.	Aylsham	306-862-5844			C
Markusson, Sheldon	Foam Lake	306-272-4545			C
Maxwell, David S.	Nipawin	306-862-9622			C
Perrault, Jerome	Zenon Park	306-767-2254			C
Ratzlaff, Kenneth Douglas	Prince Albert	306-922-4332			C
Schappert, Roland	Langenburg	306-743-5474			C
Tanner, Edward William	Tisdale	306-873-5109			C
AMERISTAND 201+Z					
Viterra	Saskatoon	800-565-7333			C
Newton, Craig & Tracy	Atwater	306-745-2572			C
APPROVED					
Farmpure Seeds	Regina	306-791-0500			C
ASCEND					
Brett-Young Seeds Limited	St. Norbert	204-261-7932			C

BEAVER				
Baxter, Daniel J.H.	North Battleford	306-445-5414		C
Bjornson, Gregory P.	Wynyard	306-554-3302		C
Bueckert, Phil	Eyebrow	306-759-2076		C
Cay, Norman Maurice	Tisdale	306-873-5527		C
Cay, Robert Norman	Tisdale	306-873-5527		C
Donkers, Hank	White Fox	306-276-2551		C
Farmpure Seeds	Regina	306-791-0500		C
Gullacher, Evan	Imperial	306-963-2511		C
Gunther, Lance Blaine	Lanigan	306-365-4231		C
Hue, Allan	Hudson Bay	306-865-2445		C
MacLeod, Bryce	Aberdeen	306-253-4620		C
Sigfusson, Harold Edward	Wynyard	306-554-2039		C
Verbergt, Arnold	Weyburn	306-842-7968		C
Wildeman, Maurice Don	Lanigan	306-365-4395		C
CONVOY				
Kushniruk, David	Melville	306-728-5835		C
DAKOTA				
Northstar Seed Ltd.	Neepawa	204-476-5241		C
ENHANCER				
Northstar Seed Ltd.	Neepawa	204-476-5241		C
ESPRIT				
Pickseed Canada Inc.	Winnipeg	204-633-0088		C
EVOLUTION				
Northstar Seed Ltd.	Neepawa	204-476-5241		C
GALA				
Viterra	Saskatoon	800-565-7333		C
GENEVA				
Pickseed Canada Inc.	Winnipeg	204-633-0088		C
GENOA				
Pickseed Canada Inc.	Winnipeg	204-633-0088		C
GIBRALTAR				
Pickseed Canada Inc.	Winnipeg	204-633-0088		C
HAYGRAZER				
Gourley, Bruce D.	Watson	306-287-3127		C
LEGENDAIRY 5.0				
Farmpure Seeds	Regina	306-791-0500		C
MAGNUM 3801 WET				
Gourley, Bruce D.	Watson	306-287-3127		C
MARQUIS				
Northstar Seed Ltd.	Neepawa	204-476-5241	F	
MATRIX (4241 - USA)				
Interlake Forage Seeds Ltd.	Fisher Branch	204-372-6920		C
MULTI5301				
Interlake Forage Seeds Ltd.	Fisher Branch	204-372-6920		C
MULTIPLIER 3				
Northstar Seed Ltd.	Neepawa	204-476-5241		C
NEMESIS				
Lalonde, Lucien & Denise	Zenon Park	306-767-2293	F	
PEACE				
Fortier, Albert	Zenon Park	306-767-2499		C
PERFECT				
Pickseed Canada Inc.	Winnipeg	204-633-0088		C
PICKSEED 2065MF				
Pickseed Canada Inc.	Winnipeg	204-633-0088	F	C
PICKSEED 3006				
Pickseed Canada Inc.	Winnipeg	204-633-0088	F	C
PICKSEED 8925MF				
Pickseed Canada Inc.	Winnipeg	204-633-0088	F	C

RAMBLER

Farmpure Seeds	Regina	306-791-0500	F	C
Lalonde, Lucien & Denise	Zenon Park	306-767-2293		C

RANGELANDER

Bjornson, Gregory P.	Wynyard	306-554-3302		C
Farmpure Seeds	Regina	306-791-0500		C
Gullacher, Evan	Imperial	306-963-2511		C
Martodam, Robert	Spiritwood	306-883-2091	F	C
Morris, Richard Johnathon	Carrot River	306-768-2905		C
Nicklen, Gregory	Carrot River	306-768-2251		C
Perrault, Jerome	Zenon Park	306-767-2254		C
Ricard, Gene & Ray	Estevan	306-634-0103		C
Riou, Stephen	Arborfield	306-769-8313		C

REBOUND 5.0

Farmpure Seeds	Regina	306-791-0500		C

RHINO

Northstar Seed Ltd.	Neepawa	204-476-5241		C

SPREDOR 4

Viterra	Saskatoon	800-565-7333		C

STARBUCK

Pickseed Canada Inc.	Winnipeg	204-633-0088		C

STEAK

Pickseed Canada Inc.	Winnipeg	204-633-0088	F	C

STEALTH SF

Northstar Seed Ltd.	Neepawa	204-476-5241		C

SURPASS

Northstar Seed Ltd.	Neepawa	204-476-5241		C

TOPHAND

Northstar Seed Ltd.	Neepawa	204-476-5241		C

VALIANT

Brett-Young Seeds Limited	St. Norbert	204-261-7932	F	C

WINTERGOLD

Hansen, Kurt	Marsden	306-826-5615		C
Viterra	Saskatoon	800-565-7333		C

CICER MILK VETCH

AC OXLEY II

Farmpure Seeds	Regina	306-791-0500		C

CLOVER - ALSIKE

AURORA

Higgins, Chester Keith	Tisdale	306-873-2239		C

DAWN

Pickseed Canada Inc.	Winnipeg	204-633-0088	F	C

FRIDA

Farmpure Seeds	Regina	306-791-0500	F	C

CLOVER - RED

ALTASWEDE

Pickseed Canada Inc.	Winnipeg	204-633-0088		C

FRONTENAC (OECD=LUCRUM)

Pickseed Canada Inc.	Winnipeg	204-633-0088		C

JULIET

Brett-Young Seeds Limited	St. Norbert	204-261-7932		C

KVARTA

Pickseed Canada Inc.	Winnipeg	204-633-0088	F	C

TEMPUS

Pickseed Canada Inc.	Winnipeg	204-633-0088		C

CLOVER - SWEET

NORGOLD

Farmpure Seeds	Regina	306-791-0500		C

BLUEGRASS - GLAUCOUS

BEARPAW

Farmpure Seeds	Regina	306-791-0500	F	

BLUEGRASS - KENTUCKY

OPAL

Farmpure Seeds	Regina	306-791-0500		C

BROMEGRASS - HYBRID

AC KNOWLES

Viterra	Saskatoon	800-565-7333	F	C

AC SUCCESS

Farmpure Seeds	Regina	306-791-0500	F	C

BROMEGRASS - MEADOW

FLEET

Antony, Lawrence	Macnutt	306-742-4585		C
Northstar Seed Ltd.	Neepawa	204-476-5241		C
Trawin, John	Melfort	306-752-4060	F	C
Viterra	Saskatoon	800-565-7333		C

MONTANA

Viterra	Saskatoon	800-565-7333		C

PADDOCK

Farmpure Seeds	Regina	306-791-0500	F	C
Scowen, Richard D.	Nipawin	306-862-2079		C

BROMEGRASS - SMOOTH

AC ROCKET

Viterra	Saskatoon	800-565-7333		C

BRAVO

Pickseed Canada Inc.	Winnipeg	204-633-0088		C

MAGNA

Farmpure Seeds	Regina	306-791-0500		C

MANCHAR

Staffen, James R.	Nipawin	306-862-5301		C

PEAK

Farmpure Seeds	Regina	306-791-0500		C

RADISSON

Pickseed Canada Inc.	Winnipeg	204-633-0088	F	C

SIGNAL

Viterra	Regina	306-569-4082		C

CANARYGRASS

KEET

Ackerman, Patrick	Chamberlain	306-638-3177		C
Craswell, Raymond W.	Strasbourg	306-725-3236		C

CANARYSEED

CANTATE

Hansen, James S.	Yellow Grass	306-465-2525	F	

CDC TOGO

Berscheid, K.N. & B. & E.K. & S. & C. & Y.	Lake Lenore	306-368-2602		C
Fast, Walter J. & Linda	Kindersley	306-463-3626		C
Fedoruk, Rod M. & Cathy	Kamsack	306-542-4235		C
Greenshields, Grant & Jim & Callie	Semans	306-524-2155		C
Herle, Raymond & Gregory R.	Wilkie	306-843-2934		C
Hetland, Bill	Naicam	306-874-5694		C
Hyndman, David	Balcarres	306-334-2914		C
Johnson, Oscar Stuart	Margo	306-324-4315		C
Lung Seeds Ltd.	Lake Lenore	306-368-2414		C
Mayerle, Erwin D.	Tisdale	306-873-4261		C
Simpson, Greg J.	Moose Jaw	306-693-2132	R	C
Slind, Donald Edward	Archerwill	306-323-4927		C

RYEGRASS

SW BOTRUS

Farmpure Seeds	Regina	306-791-0500		C

BRIGHTSTAR

Brett-Young Seeds Limited	St. Norbert	204-261-7932		C

SWIFT

Christopher, Kim. R.	Pambrun	306-582-2181		C
Farmpure Seeds	Regina	306-791-0500		C

TIMOTHY

ALMA

Farmpure Seeds	Regina	306-791-0500		C

BASHO

Ag Vision Seeds Ltd.	Carrot River	306-768-3335		C

CHAMP

Deschamps, Gary	Tisdale	306-873-2122		C

CLIMAX

Ag Vision Seeds Ltd.	Carrot River	306-768-3335		C
Farmpure Seeds	Regina	306-791-0500	F	
Tebbutt, Ronald E. & Gregg	Nipawin	306-862-9730		C

COMTAL

Farmpure Seeds	Regina	306-791-0500		C

EXPRESS

Pickseed Canada Inc.	Winnipeg	204-633-0088		C

JONATAN

Farmpure Seeds	Regina	306-791-0500		C

JOLIETTE

Farmpure Seeds	Regina	306-791-0500		C

OVATION

Northstar Seed Ltd.	Neepawa	204-476-5241		C

PROMESSE

Brett-Young Seeds Limited	St. Norbert	204-261-7932		C

RICHMOND

Pickseed Canada Inc.	Winnipeg	204-633-0088		C

TREASURE

Pickseed Canada Inc.	Winnipeg	204-633-0088		C

VETCH -CHICKLING

AC GREENFIX

Kaeding, Roger W. & Warren	Churchbridge	306-896-2236	R	
Tinant, Adrien J.	Cadillac	306-785-4532		C

WHEATGRASS - CRESTED

AC GOLIATH

Trawin, Alan Ross, Mitchell, Ashton, Jennifer & Jessica	Melfort	306-752-4060		C

AC PARKLAND

Farmpure Seeds	Regina	306-791-0500	F	C

FAIRWAY

Clearwater, Don W.	Nipawin	306-862-3025		C
Farmpure Seeds	Regina	306-791-0500		C
Scowen, Richard D.	Nipawin	306-862-2079	F	

KIRK

Christopher, Kim. R.	Pambrun	306-582-2181		C
Doud, Aubrey	Radville	306-869-2261		C
Freedman, Brent	Gronlid	306-277-4721		C
Hochbaum, Jack	Wilkie	306-843-2054		C
Horudko, Ernest	Nipawin	306-862-4889		C

NORDAN

Ag Vision Seeds Ltd.	Carrot River	306-768-3335	R	

WHEATGRASS - INTERMEDIATE

CHIEF

Farmpure Seeds	Regina	306-791-0500		C

WHEATGRASS - SLENDER

REVENUE

Viterra	Regina	306-569-4082		C

BIRDSFOOT TREFOIL

LEO

Harrison, Douglas & Robert M.	White Fox	306-276-2424		C
Lyons, Murray F.	Nipawin	306-862-3066		C

FESCUE

SIGMUND

Farmpure Seeds	Regina	306-791-0500		C

DREW

Farmpure Seeds	Regina	306-791-0500	F	

SAINFOIN

NOVA

Farmpure Seeds	Regina	306-791-0500		C
Petracek, Arnold J. & Alan D. & Michael	Esterhazy	306-745-6210	F	C

SPELT

CDC NEXON

Tanner, David A. & Hazel	Regina	306-757-7012		C

LUPIN

ARABELLA

Bailey, Roy G.	Milden	306-935-4702	S	

How new seed varieties are developed in Canada

Registration of new seed varieties under the Seeds Control Act has been part of the agricultural regulatory process in Canada since 1923.

To date, well over 5,500 varieties have been registered, more than 70 percent of them since 1975.

According to a history written by Grant Watson, former registrar of variety registration with the Canadian Food Inspection Agency, the move to a mandatory registration process was adopted due to an influx of unscrupulous seed sellers from the United States, claiming their wheat seed would yield produce large yields, often in excess of 100 bushels per acre.

Since then, Canada's Seeds Act, and the registration process that it controls, have gone through many changes, but the mandate of the regulations remains the same: to ensure seeds sold in Canada and exported abroad are properly labelled and meet established standards for quality and varietal purity.

The process by which a new seed variety is developed, registered and made available to Canadian producers is long and complex, but in a nutshell, it follows six important steps.

Step 1: Filling a need

Many different strategies are used to establish goals for new seed breeding programs, but most start with discussions between producers or other industry members about their crop needs.

These discussions set out general research and development goals for human, livestock and industrial uses. Much of the research is aimed at developing varieties that will provide greater yields, improved disease resistance or better agronomic characteristics, he said. But improving the quality of the end product is also important.

Market influences and competition, farmer demand, funding, and environmental concerns also play a part.

Step 2: The breeding process

Plant breeders begin by searching existing varieties for the traits that they prefer. Once promising cultivars are identified, the germplasm is isolated. Through cross-breeding and genetic identification, new lines are developed. These lines are again examined for the best combination of traits and the process is repeated until the desired traits are stabilized. It typically takes 10 generations of cross-breeding to establish desired traits and to weed out undesirable qualities.

Step 3: Co-op Trials

Exhaustive laboratory work moves to the field as promising new varieties are tested under actual growing conditions in appropriate regional locations. These tests are co-operative efforts between the breeding institutions and producers, hence the name co-op trials. Producers, researchers and industry representatives administer and evaluate the trials.

Step 4: Recommending new lines

Only crop lines that perform well through the co-op testing process and are deemed to be of significant merit are selected to proceed to the appropriate crop recommending committees. Recommending committee members make final decisions on whether the line is better than existing or "check" varieties. Based on these assessments, the committee will decide whether or not to recommend the line for registration by the CFIA.

Step 5: Final approval and registration

The CFIA has various committees that test and assess whether the recommended varieties meet or exceed merit requirements. After that, another advisory committee on variety registration make the final approval decisions. Most new lines that make it this far are approved.

Step 6: Commercial production

If a public or government institution, rather than a private breeder, submits the new line, tenders are sent to seed companies, which bid for the right to develop and sell the variety in commercial quantities. Rather than tendering to the highest bidder, tenders are usually awarded to a company that can most effectively make the seed widely available to growers at a reasonable cost. Licensing fees and royalty revenues are also considered. Selection is by a committee of research managers, industry representatives and producer representatives. If the new variety comes from a private breeder, authority to develop the line is, of course, awarded to that company.

Once tendered, the seed is multiplied through the pedigreed seed process — from breeder seed to foundation to registered and commercially available seed — a process that takes three to five years.