CANADIAN FLAX

PARTNERS IN PROGRESS

2013/14 flax outlook favourable

Production estimates are pegged at a million plus acres. Producers have and continue to grow flax for several good reasons:

- **the net income of flax outperforms that of other crops**
- **flax works well in the rotation**
- **it is easy to grow**
- **it is a lower risk for the farm than other crops**

Add to that, new tools in the toolbox are increasing yields and profitability for producers. One tool is the herbicide Authority®, which is effective for kochia control. Another is Headline®, a fungicide that shows increased pasmo control. Flax is becoming the crop of choice versus the crop of chance.

Prairie flax production shows Saskatchewan at 75%, Manitoba at 13% and Alberta 9%. In Saskatchewan, acres have expanded outside of the traditional southeast corner to encompass more western and northern areas. Manitoba anticipates a return to more normal flax production this year after huge weather impacts in the province's southwest corner last season. From a marketing perspective, flax production outside the traditional growing areas is good news. An expanded geographical production base helps mitigate weather-related production risks (drought, excessive moisture, etc.).

The global flax market has seen significant shifts in recent history, with China and the United States emerging as growing markets. Efforts continue to re-establish the EU marketplace. The Farm Stewardship and Re-constituted Seed programs are collective, cooperative efforts of producers, seed industry, seed growers, registered buyers and government.

Market analysts all agree that the current commercial flax inventory is tight. Recognizing this will allow all industry stakeholders to flush the system of Triffid without undue stress on any individual sector. Prices are thought to remain relatively steady as the old crop is sold. The recommendation to plant only certified seed in 2014 will also help eliminate Triffid from the seed supply.

Our organizations, in cooperation with producers, buyers (exporters), governments and other partners are working hard to resolve the Triffid issue, increase Canadian competitiveness and market access to move the industry forward.

Terry James,
Flax Council of Canada

Erwin Hanley,
Saskatchewan Flax
Development Commission

Eric Fridfinnson
Manoitoba Flax Growers Association

got flax?
let's move it

NEW RE-CONSTITUTED SEED COMING IN 2014

Over the past two years, there has been a significant drop in flax exports and acreage as a result of weather events and the detection (in fall 2009) of CDC Triffid seed, a genetically modified (GM) variety, in shipments to the European Union (EU). EU regulations have a zero-tolerance for non-approved GM events and will not allow imports of such products.

The industry, in partnership with Agriculture and Agri-Food Canada, is working diligently to address these problems and in 2009, initiated an extensive testing and monitoring protocol to remove Triffid from the seed supply in Canada. These efforts have worked to reduce both the frequency and level of presence of Triffid.

WHY RE-CONSTITUTE?

Initially, it was thought that a widespread adoption of certified seed was the best way to reduce the presence of Triffid in the crop. However, producers did not have confidence in the certified seed supply due to the discovery of Triffid in the pedigree and breeder seed of some CDC varieties.

To instill greater confidence and ensure a Triffid-free seed supply, CDC has re-constituted their varieties through a partnership between the Flax Council of Canada, the University of Saskatchewan and SeCan. CDC varieties still represent the majority of the flax varieties planted in Canada.

Certified re-constituted supplies of CDC Bethune, CDC Sorrel and new products CDC Sanctuary and CDC Glas will be available in 2014. To differentiate the new seed lots from past seed supplies, a "14" designation will be added to the previously released varieties (i.e. CDC Bethune-14 and CDC Sorrel-14). This designation will not be necessary for CDC Sanctuary or CDC Glas since this will be the first commercial sales of these varieties.

Strict protocols were followed in the production of re-constituted seed specifically so that planting seed will be free of Triffid when it becomes available in 2014 *(see article on page 3)*. Certified AAFC varieties have been tested and found to be free of Triffid.

NEED TO 'START FROM ZERO'

Farm-saved seed, although unlikely to be planted if it tested positive, still has 4 per cent of the production tests showing positive. The industry cannot get to zero without starting with zero. Certified seed is as close as we can get to Triffid free seed because it is rigorously tested, produced and handled in a secure environment. It has not tested positive for two years. The focus in 2013 is to prepare for 2014 and beyond.

As long as stock seed is planted in the spring of 2013, SeCan can still have enough certified seed to plant over one million acres of flax with re-constituted breeder seed. This is the reason for the re-launch of CDC varieties in 2014.

Book your seed orders early. It is important for producers to communicate their anticipated certified seed requirements to their seed dealers so a sufficient amount of pedigreed seed is available.

MOVE EXISTING FLAX STOCKS NOW

Flax producers need to replace their existing planting seed stocks for the 2014 season so that all traces of Triffid can be flushed from the seed supply. During the 2013 and 2014 seasons, flax producers are asked to deliver all previous flax seed stocks, especially deregistered varieties to the commercial system to minimize the chance of cross contamination of new flax supplies with old inventory. It is critical to draw out all remnant supplies from previous flax production years that may or may not have been tested for Triffid. Even a small lot of a deregistered variety entering the system in 2015 or beyond could jeopardize all our efforts in this process.

That's why it is crucial for flax growers to spread the word to other producers—even if they haven't grown flax for years—about how important it is to follow the guidelines.

This program will refresh our seed supply which is good agronomic practice, aid in our market access efforts, provide the best possible chance of reducing the level of Triffid below the level of detection and will reduce the need for testing in the future. If we all work together, we can reboot our industry and Canada can again become known for growing the best flax in the world.

For information, see www.flaxcouncil.ca or www.saskflax.com.

SeCan Growers
go the extra mile to
produce re-constituted flax seed

Everyone in the flax industry has endured the pain associated with trace levels of CDC Triffid in the Canadian flax crop. SeCan has been working closely with the Flax Council of Canada, the provincial flax commissions and the University of Saskatchewan's Crop Development Centre (CDC) to flush Triffid from the Canadian system.

Seed growers have gone to some extra lengths to remove Triffid from the seed supply. Here are the steps leading to the release of re-constituted flax seed for fall 2013:

1/ In 2010, individual plants were grown in CDC's greenhouse – each plant was tested prior to being harvested to form the new pre-Breeder stocks.

2/ These plants were harvested and sent to New Zealand for winter increase (saving one year of multiplication).

3/ The seed was tested and returned to Canada and grown on a farm in Saskatchewan that had never grown flax.

4/ This seed was harvested, tested, and sent to New Zealand for another winter increase (saving a second year in the time to release).

5/ The crop was grown on New Zealand land that had not grown flax in a 100-year history. The seed was again harvested, tested, and returned to Canada in spring 2012 for release to SeCan members.

6/ Prior to receiving the seed, SeCan members signed a Supplementary Agreement, committing to follow these requirements to remove the risk of contamination:

- be grown on land free of flax production of any kind for the previous five years at a minimum (land with no history of flax production was preferred)
- be grown on an operation with no flax production other than pedigreed seed production
- be seeded, harvested, and cleaned with equipment that had not previously been used for non-pedigreed seed flax production for one year
- complete a "Pre-cleaning Self Inspection Checklist and Declaration"
- have an alternate crop cleaned between re-constituted Breeder seed and other pedigreed flax seed lots
- test all seed using current 4 x 60 protocol as outlined by the Flax Council of Canada
- agree to dispose of all previous seed stocks of CDC Bethune and CDC Sorrel at the end of 2013 spring season (our goal is to ensure two seed sources of the same variety are not available in the market at the same time).

All re-constituted seed of CDC Bethune and CDC Sorrel will be produced under their original experimental numbers so they can be differentiated during the seed multiplication process.

During summer 2013 (after spring sales), SeCan and CDC will request name changes for CDC Bethune and CDC Sorrel to "CDC Bethune14" and "CDC Sorrel14". The goal is to ensure the new seed source is differentiated – yet minimize any confusion.

We are optimistic the extraordinary efforts taken by SeCan seed growers will help the Canadian flax industry move past the Triffid issue. The keys to success will be ensuring quick uptake of the re-constituted seed supply and having producers deliver their oldest inventory first - to get it out of the system before harvest in 2014.

Re-constituted seed of the following flax varieties will be available fall 2013:

CDC Bethune14
CDC Sorrel14
CDC Sanctuary
CDC Glas

Why Use Certified Seed?

Dave Akister, Saskatchewan Seed Growers

When margins are squeezed and producers are searching for the most economical means of producing a crop, more and more they are asking,

"Why should I use certified seed?"

The short answer:
It is the best insurance a flax producer can put in the ground.

Rarely is the planting environment ideal. Usually it is too hot, too cold, too dry or too wet. Weeds, diseases and insect pests also threaten flax crops.

Certified seed is true-to-type. That means the crop it produces is predictable in terms of yield, lodging, disease resistance, maturity and other key characteristics. But genetic purity isn't the only feature of certified seed.

Certified seed ensures specified germination for even emergence and productive stands. It contains uniform seed size, which provides consistency in planting and crop performance. Optimum seed size promotes seedling vigour and high yields; low disease levels to maintain crop health; and minimal cross-contamination from other crops or different varieties of the same crop. Freedom from other crop seeds, noxious and other weed seeds is controlled by federal regulations to ensure mechanical purity as well.

Genetic purity standards ensure that varieties can be chosen that fit the producer's needs in terms of yield potential, growth habit, disease and insect resistance, maturity and specific markets. Genetic information packed into each seed determines when it will germinate, how well it will handle cold or wet soil, whether it will survive attack by bacteria, viruses and mould, and how much will be harvested if each plant produces to its full potential.

Certified – or what we often call pedigreed – seed carries the technical research from the plant breeder to the end user. It is the source of seed that is used for crop improvement and is the basis of the high reputation for crop quality in Canadian agriculture.

Pedigreed seed is also the only practical means of increasing, ensuring and certifying that a seed stock has high genetic purity and quality standards. This is accomplished by inspection of pedigreed seed crops by trained inspection officers of the Canadian Food Inspection Agency (CFIA), by the administration of genetic crop purity standards by the Canadian Seed Growers Association (CSGA) and by the application of seed quality standards (germination and mechanical purity) of the Canada Seeds Act. Even the cleaning plant that processes it must meet accepted standards and practices monitored by the Canadian Seed Institute (CSI).

At each stage of pedigreed seed production, standards for isolation distances, land-use history, maximum levels of off-types, other crop kinds and weeds have been established by the CSGA. These are the rules all seed growers must follow to maintain the mechanical and genetic purity of their pedigreed seed crops.

The blue "Certified Seed" tag guarantees the seed you buy has gone through all the required multiplication, inspection and cleaning processes to ensure a pure product. You get seed that is true to type, a pure variety with the newest plant genetics, more uniform germination for stronger competition in the fields and an easier harvest, higher yields, and access to end-use specific identity-preserved markets.

Pedigreed seed means just that: the ancestry of the seed can be traced through records maintained by the CSGA all the way back to the plant breeder and the lab from which it originated.

Seed out of someone's bin that may have been certified a year or two ago can't offer the same assurances. What else was in the field, the trucks, the combines, the auger or in the bins where it was stored? And what variety is it? In Canada, only pedigreed seed can be legally advertised, sold and designated with a variety name.

Canada's flax industry has faced market closures and slow-downs since the Triffid event of 2009. The industry collectively implemented the Farm Stewardship Program (testing by many stakeholders along the value chain, directing positive-tested product to non-sensitive markets). Phase Two of the program focuses on re-constituted Seed and recommends the use of certified flax for planting in 2014.

Only the Blue Tag can tell you what you are planting—who developed it; what fields it has been grown in; what weeds may have been in the field where it was grown; when it was produced; who processed it; how pure it is, how well it will germinate, and what variety it is. All that information is verified by third parties and is available to you. If you have a problem, the entire seed system is there to help sort it out. And if you didn't get the quality seed that you paid for, the resources of the Canadian government are there to protect your interests.

Why use certified seed? In 2014, certified seed means Triffid-free seed. Utilization by all flax producers demonstrates to the world our commitment to quality flax products for all global customers.

Main Characteristics of Flax Varieties

Source: Saskatchewan Ministry of Agriculture, "2013 Varieties of Grain Crops"

Flax was last tested in 2012. All varieties are immune to rust.

Frozen flax should be analyzed by a feed testing laboratory to determine that it is free of prussic acid before using it as a livestock feed.

New varieties AAC Bravo, CDC Glas (seed available in 2014), CDC Sanctuary (seed available in 2014) and Prairie Sapphire (seed available in 2013) are undergoing testing but have insufficient data to be described.

The Flax Council of Canada's Triffid Stewardship Program recommends the testing of all flax seed intended for planting, and only flax seed which tests negative for the presence of Triffid be planted.

For the latest recommendations, please visit www.flaxcouncil.ca.

* Yield data from regional and co-op trials. Variety descriptions other than yield are based on data from the Flax Co-operative Trials in the Prairie Provinces.

§ Relative maturity: The relative maturity of the check, CDC Bethune, is L (on average 101 days from seeding to swathing ripeness).

Plant Breeders' Rights at time of issue

		Yield as a % of CDC Bethune*					Resistance to		
Variety	**Years Tested**	**Area 1 & 2**	**Area 3 & 4**	**Irrigation**	**Relative Maturity §**	**Seed Size**	**Lodging**	**Powdery Mildew**	**Fusarium Wilt**
CDC Bethune	10	100	100	100	L	M	G	F	F
CDC Arras	10	95	92	92	M	L	F	P	F
Hanley	4	90	90	93	M	M	G	F	G
Lightning	6	92	92	93	L	M	G	F	G
Prairie Blue	4	99	92	97	L	S	VG	F	F
Prairie Grande	7	92	94	92	M	M	VG	F	F
Prairie Thunder	8	95	95	98	M	M	VG	F	G
CDC Sorrel	8	100	101	92	L	L	G	F	F
Taurus	6	94	99	94	M	M	G	G	F
Vimy	10	94	90	85	M	L	P	P	F
AC Watson	6	88	93	92	M	M	G	F	F

Areas roughly correspond to soil zones. Area 1 = Brown; Area 2 = Dark Brown; Area 3 = Black; Area 4 = Dark Gray/Gray

Flax Variety Registration in Review

Crushers, exporters, processors, producers, flax breeders, disease specialists and quality specialists from the Canadian Grain Commission recently came together for a series of discussions regarding variety registration and priorities for the flax industry.

Quality parameters in the marketplace are evolving as flax moves from industrial utilization to human and animal consumption markets. At the discussions, much of the talk centered around iodine values and oil content, and for producers, the impact on yield. Consensus around the table suggested iodine values could be decreased while increased seed oil content was desirable.

The marketplace has indicated concerns with product cleanliness. Current regulations allow for 8.5% dockage. Global customers, particularly in the human/animal consumption markets, are requesting lower dockage levels. Lower dockage is achievable, but exporters have explained that it is an expensive process with a high degree of shrinkage. With sulfentrazone-based products, cleaner flax at the farmgate is feasible. In the long term, glyphosate-tolerant flax will assist with lower dockage as well.

Another important factor affecting quality and markets is the number of registered flax varieties. It's a complicated situation as some of the older varieties maintain niche markets and to deregister a variety requires justification, which is a lengthy process.

Recommendations arising from this process will be discussed and debated at the PRCO (Prairie Recommending Committee for Oilseeds) in late February.

Thanks to the Flax Council of Canada for coordinating the project and submitting recommendations for consideration.

The Canadian Grain Commission (CGC) advises that the following varieties will be deregistered effective August 1, 2013:

Oilseed flax varieties
CDC Mons,
CDC Normandy

Solin flax varieties
CDC Gold, 2047, 1084, 2126, 2090, and 2149

Photos courtesy Quantum Genetix Inc.

Farm Stewardship Program

The Farm Stewardship Program involves the testing of pedigree seed, farm saved seed and farm production, with the objective of reducing the level of Triffid in the crop by ensuring only Triffid-free seed is planted and that production containing Triffid delivered to the commercial system can be segregated. Since the beginning of the program, the incidence of production samples testing positive has dropped dramatically from 10% in 2009 to around 4.0% today. More importantly, the level of Triffid in the positive tests has declined to near the detection limit of the test of 0.01%. This is a very low level, but these levels are still considered positive for shipments to the EU, which is the largest market for flax exports in the world. In order for trade with the EU to be normalized, we need to bring the incidence of positive tests even lower by reducing the level to under 0.01%.

Also important to note is that while we have had no positive tests for certified seed in the past two years, we continue to see test results of farm-saved planting seed at around 4.0%, which is similar to the levels found in production. Although seed that tests positive for Triffid is not planted, it does point to the fact that flax intended to be used as farm-saved seed is still testing positive at very low levels.

Global Flax Markets

William Hill, Flax Council of Canada

Four major developments within the last two decades have altered the global market dynamic for flax dramatically. The first is the growing awareness of the role that Omega-3 fatty acids play in human health and nutrition. Flax has the highest level of Omega-3s of any oilseed. This transitioned flax from limited use as an industrial oil into a healthy food product. Scientific research continues to support the health benefits of flax and its products and mainstream food companies are accelerating their efforts to develop technology to incorporate whole flax and its products into their products. Among the major markets to adopt flax as a food product are the US and Europe where as much as 25% of Canadian exports were reaching the food market.

The second major development was the discovery of CDC Triffid in export shipments into the EU. Although approved in Canada and the USA, it is not approved in the EU and was never commercialized in Canada. After the discovery, the EU authorities put rigid sampling and testing requirements in place that effectively closed the EU market to Canadian exports. Extensive efforts to regain unrestricted access to the EU market have been undertaken by flax producers, industry and the Canadian government. The EU is the largest import market for flax in the world and access to that market is important to the growth of Canadian flax exports.

The fallout from the Triffid event is not only important because of its impact on Canadian exports into Europe but also because of the shifts that resulted in the global market for flax. Canada has developed a growing export market into China. Industrial flax oil use is fueled by their large infrastructure build. Food demand will grow as the population seeks to improve the quality of their diet and they too embrace the health benefits of flax.

Production in the Black Sea region of Eastern Europe has risen dramatically to fill the vacuum created by the exit of Canada from the European market. Kazakhstan, Ukraine and Russia, now established as exporters to the EU, will remain strong competitors in that market. As a result, world prices will no longer be as strongly influenced by what happens in Canada.

The third major development is the increased awareness of the environmental impact of fossil fuels. Although still in its infancy, huge investments are being made in technology to develop alternatives to fossil

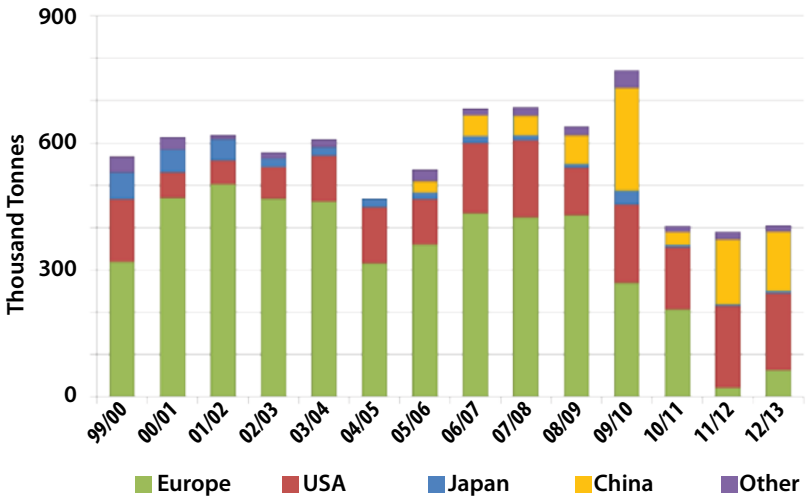
fuels in industrial products, energy and fabrics. Flax provides a natural alternative through the utilization of both its oil and fibre. As technology makes flax more competitive and consistent for its incorporation into industrial products, the demand for flax will continue to grow.

The last major development is the use of flax in animal health and productivity, both in the pet food and livestock industries. Research shows that the same healthy attributes of flax that benefit humans can also be of benefit to animals. Feed technology is emerging to allow for the greater use of flax in animal feed which could boost the demand for flax appreciably. In addition, significant gains have been made in conversion technology of Omega 3 in flax into eggs, poultry, pork and most recently beef.

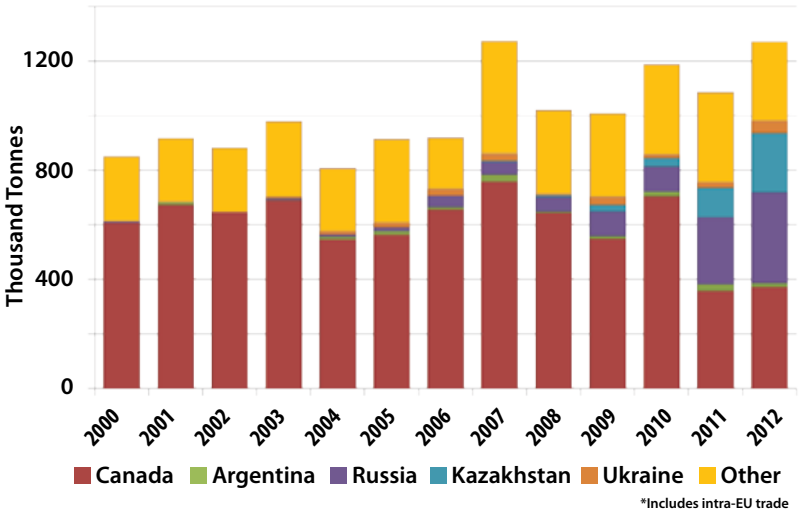
An increase in seeded acres allowed Canadian supplies of flaxseed to rebound from the low levels recorded during the previous two years when adverse weather caused a major reduction in production. Flax supplies must increase to meet the growing global demand. The challenge for Canadian flax growers is to produce more flax, more competitively to compete with other crops in Canada and global flax production. In order for that to happen, flax must provide a greater net return per acre. The industry must invest in research, including agronomy, biotechnology and plant breeding to develop best management practices and better varieties to improve yield. Yield (and consequently return per acre) has to be our first priority.

The future for flax is bright, global exports continue to grow; flax is an environmentally sustainable crop that provides significant nutritional and health benefits to humans and animals. The challenge lies in profitably growing the Canadian flax supply to meet the growing global demand.

Canadian Flax Exports by Destination

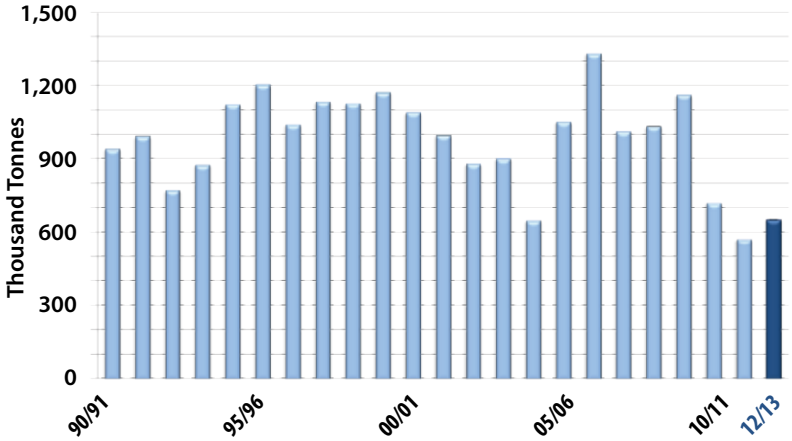


World Linseed Exports



*Includes intra-EU trade

Canadian Flax Supply



CONTACT INFORMATION

FLAX COUNCIL OF CANADA

The Flax Council of Canada is a national organization with full representation from agricultural and industrial flax interests which promotes Canadian flax and flax products for nutritional and industrial uses in domestic and international markets.

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MANFLAX

Manitoba Flax Growers Association supports initiatives in production, marketing, extension and research. MFGA works to coordinate and execute programs benefiting flax producers and the industry as a whole, from breeding and research to human and animal health, fiber and other industrial uses for flax. MFGA shares space with the Flax Council of Canada.

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SaskFlax

SaskFlax was established in 1996 and represents over 7,600 registered flax producers in Saskatchewan. Directed by flax growers, SaskFlax operates via a mandatory but refundable producer levy on flaxseed and straw. These dollars are leveraged whenever possible to execute programs ultimately geared to increase net returns to its grower members and advance Saskatchewan's flax industry.

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