

## **Discussion Document: Crop Placement for Oilseed Soybean**

### **1.0 Background**

Please see the Appendix at the end of this document for information regarding soybean biology, seed production, crop production and market trends.

### **1.1 The Registration of Soybean Varieties in Canada**

Varieties of oilseed type soybeans are subject to variety registration, and are listed in Schedule III, Part I of the *Seeds Regulations* which is defined as:

**Part I (status quo):** The registration of new varieties of crop kinds in Part 1 requires pre-registration testing and merit assessment to determine whether the variety performs as well as or better than reference varieties. This includes recommending committee recommendation that the variety was tested according to appropriate protocols (as recommended by the committee and approved by the CFIA Variety Registration Office). Part I, Schedule III is intended for crop kinds for which there is a continuing need for stringent government oversight to ensure that varieties meet minimum performance standards.

Soybean variety registration tests are conducted annually using a combination of privately run and publicly run tests. Recommending committees coordinate these tests and establish testing protocols (subject to review by CFIA). The purpose of these tests is to obtain agronomic, pest, disease, and quality information for use by recommending committees in assessing whether or not to recommend a variety for registration to the CFIA Variety Registration Office (VRO).

The Ontario Oil and Protein Seed Crop Committee (OOPSCC) is the CFIA recognized recommending body for the registration of soybeans in the province of Ontario.

The Manitoba Pulse Growers Association (MPGA) participates with OOPSCC to coordinate trials in Manitoba and jointly supports recommendations for national registration of soybean varieties which are adapted to Manitoba.

The "Réseau des plantes oléo protéagineuses du Réseau de Grandes Cultures du Québec" (RGCO) is the recognized recommending committee for the registration of soybeans in the province of Québec.

As of October 2010, the CFIA 738 varieties were registered in Canada.

In the five year period from August 31, 2004 to August 31, 2009, 279 soybean varieties were registered. Twenty of these varieties were recommended for registration by the RGCO and the remaining 259 were recommended by OOPSCC. A significant number of

varieties are de-registered and removed from the list each year but, overall, the list of registered varieties continues to grow. More of these varieties are for the new shorter season growing areas. Food-type soybeans are currently exempt from registration. This discussion document is not focused on crop placement of food-type soybeans.

## **1.2 Pre-registration testing and other merit assessment costs**

The cost of submitting an application for registration is \$875. This fee is currently the same for crop kinds in all Parts of Schedule III. Changing the crop placement to a different Part will not, at this time, change the cost of application for registration.

Costs are also incurred to conduct pre-registration testing. This testing is conducted annually through a combination of publically and privately run tests.

## **1.3 Post-registration variety performance testing**

Variety Registration does not require post - registration testing of varieties. Data collected and used by a Recommending Committee for supporting the registration of a variety is not publicly available from CFIA. It is not within the mandate of the CFIA-VRO to publish data submitted to support variety registration. The CFIA-VRO also has no authority under the *Seeds Act* and *Regulations* to collect or publish post-registration test data.

Soybean seed suppliers and agronomists recognize that considerable varietal performance information is required for/by growers. The information that is available in the marketplace is assembled from sources other than the variety recommendation trials and is published by private and provincially funded organizations.

Buyers of seed want data that compares promising new varieties to known varieties that are adapted to their region. Provincial Agriculture Ministries provide variety comparison guides for soybean varieties and other agronomic information on their provincial agriculture websites or in print format.

There is an extensive amount of post-registration testing conducted by the soybean crop committees. This information is published in both printed and website format.

Private suppliers of soybean seed also publish a large number of comparison guides and variety fact sheets.

Soybean is a quantitative short day length plant and therefore flowers more rapidly under short day lengths. As a result, photoperiodism and temperature response are important in determining areas of cultivar adaptation. Soybean cultivars are identified based on bands of adaptation throughout North America that run east-west. Soybean variety developers and their agronomists play a key role in helping a soybean producer decide which varieties are best adapted to their farm.

Ongoing or post-registration testing is an issue separate from the variety registration process, including any considerations of the placement of crop kinds within Parts of Schedule III.

#### **1.4 Soybean Variety Development**

Table 1 provides a detailed breakdown of the soybean variety registration applications submitted over the five year period from 2004 to 2009. In this period a total of 279 registrations completed with 33 (12%) derived from public breeding programs and 246 (88%) from private breeding programs.

In North America, soybean cultivars are identified based on bands of adaptation that run east-west and many varieties are well adapted to both Canada and northern United States. The area planted to soybeans in United States is approximately 31 million hectares or 30 times Canada's production. Canadian producers benefit from variety development programs in the United States with a total of 143 varieties (51%) originating from private breeding programs based in the United States. This is significant because improved, or new, varieties can be introduced to American soybean producers and seed multiplication can begin without the added step of Canadian variety registration testing. The gap in time between when Canadian and American soybean growers have access to new varieties has been recognized by members of the OOPSCC committee and the number of station years required for support for registration in Canada has been significantly reduced as a result.

The Ontario committee has supported 268 varieties (96%) and the Quebec committee supported the other 11 varieties (4%) which were nationally registered.

Table 1 Number of Variety Registrations from Soybean Breeding Programs & Recommending Committee

Source: CFIA Variety Registration Office

Breeding Institution		Sept 2004	2005	2006	2007	2008	Aug 2009	Total	
<b>Canada</b>									
	Public <sup>1</sup>	4	6	9	4	4	3	30	11%
	Private <sup>2</sup>	4	14	18	20	25	8	89	32%
	Total	8	20	27	24	29	11	119	43%
<b>USA</b>									
	Public		1					1	0%
	Private	6	26	59	23	13	16	143	51%
	Total	6	27	59	23	13	16	144	52%
<b>Foreign</b>									
	Public					2		2	1%
	Private					13	1	14	5%
	Total	0	0	0	0	15	1	16	6%
<b>Overall</b>									
	Public	4	7	9	4	6	3	33	12%
	Private	10	40	77	43	51	25	246	88%
	Total	14	47	86	47	57	28	279	100%
<b>Recommending Committee</b>									
	Ontario	14	43	84	43	56	28	268	96%
	Quebec	0	4	2	4	1	0	11	4%

Public<sup>1</sup> Developed at Agriculture & AgriFood Canada (AAFC) or in association with a Canadian university.

Private<sup>2</sup> Country determined by the residency of the breeding program named on the Variety Registration application

Source: CFIA Variety Registration Office, August 2009

The trend of continued soybean variety development is expected to continue in Canada. Table 2 summarizes the results of a survey of Canadian Seed Trade Association (CSTA) members on intended plant breeding investment in soybeans. In 2007, the private sector invested \$3.9 million in soybean variety development which is an increase from less than one million two decades earlier. In 2007 CSTA member companies were projecting their annual product development investment would reach over \$12 million by the year 2012.

Table 2 Canadian Private Sector Investment in Plant Breeding (\$000,000)  
 Source: CSTA Member Survey, 2007

	1987	2001	2007	Projected 2012
Corn	2.8	7.9	4.80	9.0
Canola	7.1	30.5	41.90	80.0
Cereals	1.5	2.3	3.30	2.7
Soybeans	0.7	2.6	3.90	12.7
Forages	0.3	0.8	0.49	0.5
Special Crops	0.1	0.4	0.12	0.1
Garden Seed	0.1	0.0	0.00	0.0
Other	1.6	0.8	1.60	1.4

### 1.5 Flexible Variety Registration System

The Government of Canada implemented regulatory changes in July 2009 to create a more flexible variety registration system with reduced regulation while continuing to maintain the integrity of seed certification and environmental, food, and feed safety.

Previously, all crop types requiring variety registration were subject to the same pre-registration testing and merit assessment requirements. The Regulations now partition the list of crop types requiring registration of varieties (Schedule III) into three Parts with differing requirements for each Part.

- Part I will continue to require pre-registration testing and merit assessment. This includes recommending committee recommendation that the variety was tested according to appropriate protocols and that the variety is equal to or better than reference varieties.
- Part II will require pre-registration testing. In this model, recommending committees would establish protocols for the testing of varieties. These protocols would be reviewed and approved by the CFIA. The protocols could include public and/or private testing. Testing would need to be completed prior to recommending committee assessment of whether the variety was tested according to protocols established by the committee. Recommending committee recommendation that the variety was tested according to appropriate protocols would be required as part of the application for registration submitted to the CFIA.

- Part III will require basic registration information only. Applications for registration would be submitted directly to the CFIA. The applications for registration would include a reference sample, application for registration, details of the pedigree and history of development of the variety, variety description, whether the variety contains a novel trait, fees, etcetera.

In order for a specific crop kind to move from one Part of Schedule III to another, a regulatory amendment is required. These subsequent regulatory amendments can proceed once a rationale and consensus for change have been established through the CFIA's consultation with individual crop sectors. Many stakeholders have submitted opinions and rationale for changes in crop placement for forage crops.

For the purposes of discussion, minor and major forage crops could be treated separately as they have differing rationales.

## **2. Issue to be addressed**

There is a need to ensure that the regulatory burden (time, cost, and requirements) imposed at the time of variety registration is commensurate with risk and is not unnecessarily burdensome.

Concerns have been raised regarding the need to would reduce the regulatory burden and associated costs for both public and private developers of new soybean cultivars. This is particularly important for soybeans because approximately 50% of new soybean varieties originate from USA soybean breeding programs and Canadian soybean growers need synchronous access to new varieties in order to be on par with their US counterparts.

Moving oilseed type soybeans from the current Part I of Schedule III to Part III would remove the requirement for merit assessment by committee and all the associated costs (time/money) currently associated with it.

### **3.0 Proposed Change**

There is a strong rationale and consensus for moving oilseed soybean to Part III to increase timely access to new varieties. In the feedback received to date, there appears to be a high degree of consensus for the movement of oilseed soybeans to Part III.

### **3.1 Process**

Once the rationale and consensus for changes to crop placement in Schedule III have been established, the regulatory change process will be initiated. The proposed change in crop placement in Schedule III would be pre-published in the *Canada Gazette*, Part I for a public comment period. Comments would be reviewed and addressed and, barring

any significant issues, the amendments would come into force when published in the *Canada Gazette*, Part II.

#### **4. Potential Impacts of the Proposed Changes**

The CFIA has received feedback as to the potential impacts of the proposed change through direct correspondence and fora such as the October 27, 2009 Workshop on Seed Program Modernization.

Movement of oilseed type soybeans to Schedule III, Part III would likely:

- Lead to a more timely availability of new cultivars to producers across Canada. Not only is this important to maintain good yield improvements over time but Canadian producers also will benefit by more rapid access to disease resistance and other value added traits (i.e. Asian soybean rust). It is anticipated that the proposed change will decrease the time to market a new variety by a full year as a minimum.
- Provide the ability to quickly adapt to changing markets and other agronomic considerations. It decreases the lag time from innovation to commercialization in the soybean crop.
- Have no impact on buyers of common seed and may increase the use of Certified seed due to the increased turnover of varieties in the market coupled with the anticipated increased rate of improvement in varieties in the market. It is anticipated that this will increase demand for Certified seed, particularly for new varieties.
- Allow seed multiplication to start sooner in Canada because a change in placement would remove the business risk associated in obtaining support for registration from one of the soybean registration recommending committees.
- Not change the post-registration yield information currently gathered in some regions by federal, provincial, regional institutions, and by the private sector. This information, plus that from other sources, is readily available for a seed buying decision from provincial and private websites and publications. This will continue to be available and is independent of species placement in Schedule III.
- Still require CFIA Variety Registration approval for oilseed soybean varieties. The introduction of new varieties will continue to be regulated under Schedule III, Part III and the information on varieties will still be collected by the VRO. Any performance claims will still require data to support them. Also, varieties still can continue to be de-registered "for cause" by the Registrar if deemed appropriate.
- Have no effect on other regulatory requirements. All soybean varieties (oilseed type and specialty) will continue to be regulated by:
  - Soybean plant pests of quarantine significance are regulated by the *Plant Protection Act and Regulations*.

- Biosafety and the introduction of Plants with Novel Traits are regulated under Part V of *the Seed Regulations*.
  - Soybeans and soybean products that are defined as novel feeds are regulated under the *Feeds Act and Regulations*.
  - Soybeans and soybean products that are defined as novel foods are regulated under the *Food and Drugs Act and Regulations*.
- Data to support claims of end use quality, disease resistance or herbicide tolerance would continue to be collected and must be provided to the CFIA as part of the application for variety registration.

## 5. Consultation Question

Your feedback on the impact of this proposal is being sought. From your perspective:

1. What would be the positive and/or negative impacts of the movement of oilseed soybean to Part III (i.e., the removal of the requirements for recommending committee assessment of testing procedures and merit of candidate varieties)?

Please provide your feedback directly to Cindy Pearson at the co-ordinates below by December 6, 2010. Also, please do not hesitate to contact me for additional information.

Thank you for your input and collaboration in this process to improve the variety registration system.

Best regards,

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## APPENDICES

### A) Biology of Soybean

Source: Condensed from OECD ENV/JM/MONO(2000)9 11

Cultivated soybean, *Glycine max* (L.) Merr., is a diploidized tetraploid ( $2n=40$ ), in the family Leguminosae, subfamily Papilionoideae, tribe Phaseoleae, genus *Glycine* Willd., subgenus *Soja* (Moench). It is an erect, bushy herbaceous annual that can reach a height of 1.5 meters. Three types of growth habit can be found amongst soybean cultivars: determinate, semi-determinate and indeterminate. Determinate growth is characterized by the cessation of vegetative activity of the terminal bud when it becomes an inflorescence at both axillary and terminal racemes. Determinate genotypes are primarily grown in the southern United States (Maturity Groups V to X). Indeterminate genotypes continue vegetative activity throughout the flowering period and are grown primarily in central and northern regions of North America (Maturity Groups 000 to IV). Semi-determinate types have indeterminate stems that terminate vegetative growth abruptly after the flowering period. None of the soybean varieties are frost tolerant, and they do not survive freezing winter conditions.

Soybean is grown primarily for the production of seed, has a multitude of uses in the food and industrial sectors, and represents one of the major sources of edible vegetable oil and of proteins for livestock feed use.

A major food use in North America and Europe is as purified oil, utilized in margarines, shortenings and cooking and salad oils. It is also used in various food products, including tofu, soya sauce, simulated milk and meat products. Soybean meal is used as a supplement in feed rations for livestock. Industrial use of soybeans ranges from the production of yeasts and antibodies to the manufacture of soaps and disinfectants.

Soybean is commonly considered one of the oldest cultivated crops native to North and Central China.

### B) Centers of Origin of the Species

*Glycine max* belongs to the subgenus *Soja*, which also contains *G. soja* and *G. gracilis*. *Glycine soja*, a wild species of soybean, grows in fields, hedgerows, roadsides and riverbanks in many Asian countries. Wild soybean species are endemic in China, Korea, Japan, Taiwan and the former USSR, but do not exist naturally in North America.

### C) Reproductive Biology

Soybean is considered a self-pollinated species, propagated commercially by seed. Artificial hybridization is used for cultivar breeding. Soybeans exhibit a high percentage of self-fertilization, and cross pollination is usually less than one percent.

### D) Agronomic Practices

Soybean is a quantitative short day plant and hence flowers more quickly under short days. As a result, photoperiodism and temperature response are important in determining areas of cultivar adaptation. Soybean cultivars are identified based on bands of adaptation that run east-west, determined by latitude and day length. In North America, there are thirteen maturity groups (MG), from MG 000 in the north (45° latitude) to MG X near the equator. Within each maturity group, cultivars are described as early, medium or late maturing.

### E) Canadian Market Profile

#### Canadian Seed production

Table 3 Provincial Annual Inspected Seed Production area (hectares)

Source: Canadian Seed Growers Association (CSGA)

	PEI	NS	NB	QC	ON	MB	SK	AB	BC	CANADA (rounded to nearest 1000)
1996	<200	<200		6,254	32,359					39,000
1997	<200	<200		7,923	41,896	<200				50,000
1998	<200	<200		9,753	49,987	<200				60,000
1999	<200			10,237	49,997	<200				60,000
2000	<200			9,473	46,685	652				57,000
2001	<200	<200		11,824	71,555	2,250				86,000
2002	<200	<200		9,146	56,909	3,322				69,000
2003	<200			9,634	49,082	4,371				63,000
2004	<200			11,811	57,174	6,784				76,000
2005	<200			12,615	56,359	8,158				77,000
2006	<200			12,330	54,802	11,571				79,000
2007	<200			11,197	48,183	8,289				68,000
2008	<200		<200	13,966	50,582	8,456	218	<200		74,000

The Canadian soybean seed production area (for producing seed for sowing) has increased from 1996 through 2004 inclusively, reaching approximately 75,000 hectares then, although variable, not advancing above this number at least up to 2008. In Ontario, where the majority of the production takes place, the hectareage is variable from year to year, but essentially stable from 2002 to 2008. Of note, there are regional increases in both Quebec and Manitoba.

Table 4 Imported Soybean Seed for Sowing

<b>Soybean for Sowing: Canadian Imports from All Countries (Crop Year: July – June)</b>								
	<b>VALUE (\$ Can)</b>				<b>QUANTITY (KGM)</b>			
	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>
<b>TOTAL:</b>	3,049,187	6,739,633	4,323,990	7,005,354	3,423,912	8,289,219	4,813,913	9,048,691
<b>USA</b>	2,944,178	6,665,802	4,217,527	6,778,613	3,272,558	8,167,518	4,645,305	8,852,766
<b>Chile</b>	32,070	20,389	30,236	201,654	38,306	21,166	25,054	152,712
<b>Argentina</b>	57,246	52,841	72,449	19,547	101,755	99,779	138,524	35,661
<b>China</b>	9,684	0	0	100	5,906	0	0	90
<b>Japan</b>	5,969	150	0	3,662	5,337	296	0	4,756
<b>Egypt</b>	0	0	3,652	0	0	0	4,900	0
<b>Costa Rica</b>	40	445	27	1,751	50	454	42	2,677
<b>Brazil</b>	0	0	53	0	0	0	50	0
<b>Thailand</b>	0	6	34	0	0	6	32	0
<b>Myanmar</b>	0	0	12	27	0	0	6	29

The majority of imported soybean seed for planting originates from the United States and from importations from contra-season seed productions (typically from South America). There is a smaller but significant import market from Japan as well. The majority of imports from the United States are of the most recently registered (or pending registration) varieties registered in Canada at the time (this very often includes the South America contra-season produced seed).

Table 5 Exported Soybean Seed for Sowing

Soybean Seed for Sowing: Canadian Exports to All Countries (Crop Year: July – June)								
	VALUE (\$ Can)				QUANTITY (KGM)			
	2004/05	2005/06	2006/07	2007/08	2004/05	2005/06	2006/07	2007/08
<b>TOTAL:</b>	7,365,133	6,459,592	3,901,743	8,352,444	9,688,089	11,109,954	6,292,949	13,531,878
<b>USA</b>	6,000,294	5,760,328	3,315,526	6,585,039	8,054,751	10,331,187	5,574,281	11,276,700
<b>Italy</b>	245,607	439,200	3,355	278,331	423,150	495,830	2,250	247,665
<b>Czech Rep.</b>	581,698	55,056	19,244	0	479,946	39,839	11,486	0
<b>Ukraine</b>	0	0	116,100	515,875	0	0	95,000	258,453
<b>Japan</b>	175,971	49,371	78,596	258,560	350,800	103,650	186,670	521,320
<b>Belgium</b>	0	0	0	424,488	0	0	0	973,700
<b>Romania</b>	0	0	154,982	160,459	0	0	171,460	138,600
<b>Germany</b>	174,084	18,789	90,081	19,417	139,241	9,796	43,111	10,496
<b>France</b>	51,193	27,830	0	2,399	60,530	19,726	0	1,959
<b>Malaysia</b>	56,638	0	20,724	0	122,850	0	61,865	0
<b>Singapore</b>	4,978	5,183	1,343	60,884	3,651	2,100	500	58,817
<b>Austria</b>	0	54,004	9,251	0	0	18,002	3,126	0
<b>Slovakia</b>	20,243	11,024	7,186	23,014	13,665	6,628	3,220	13,121
<b>China</b>	46,421	0	0	0	20,000	0	0	0
<b>Cuba</b>	0	0	43,560	0	0	0	38,556	0
<b>Surinam</b>	0	19,278	19,491	0	0	41,918	40,824	0
<b>Trinidad &amp; Tobago</b>	8,006	19,529	0	0	19,505	41,278	0	0
<b>Hong Kong</b>	0	0	0	17,313	0	0	0	26,100
<b>Netherlands</b>	0	0	13,686	0	0	0	39,600	0
<b>Saudi Arabia</b>	0	0	8,618	0	0	0	21,000	0
<b>Taiwan</b>	0	0	0	4,565	0	0	0	3,697
<b>Chile</b>	0	0	0	2,100	0	0	0	1,250

Canadian exports of soybean seed for sowing to the United States and Japan, our two largest customers are regular but variable in volume. Soybean seed is also exported to a large number of other countries, but the volume is highly variable from year to year.

Overall, in terms of economic value, from 2004/05 through 2007/08 Canada was a net importer of soybean seed for sowing. The imports are primarily from the United States.

### Soybean Crop Production in Canada

Source: Canadian Soybean Council

Soybeans are primarily grown in Ontario, Quebec and Manitoba, with some production in Atlantic Canada and Saskatchewan. Until the 1970s, soybean production was limited to southern Ontario. Advancements in soybean breeding have resulted in the development of earlier maturing varieties that are suitable for eastern Ontario, Quebec and Manitoba. Figure 1 illustrates the majority of Canadian soybean hectareage is in Ontario and Quebec, between the Great Lakes and St. Lawrence River basin.

Figure 1 Areas of soybean production in Canada



The temperate climate and fertile soils found in this area are key components in producing the highest quality soybeans for food uses. Canada accounts for less than 2 percent of the world's total soybean production, but is an important supplier of specialty, high quality food grade soybeans. Approximately 35 percent of Canada's production is destined for premium export markets such as Japan and Europe.

In 2006, soybeans were Canada's fifth most valuable field crop after canola, wheat, potatoes, and corn. Farm cash receipts attributed to soybean amounted to \$680 million during that year. Exports of Canadian soybeans contributed to the value of soybean receipts. During the 2006-07 crop year (September 1 - August 31), over 1.7 million tonnes of soybeans were exported.

In Canada, soybeans are typically grown as part of a crop rotation (corn-soybeans-wheat). There are a number of benefits to growing crops in rotation, such as:

- Reducing disease, pest and weed pressure
- Protecting against erosion and building soil structure
- Good crop rotations will provide consistent yields
- Increased profit potential for producers

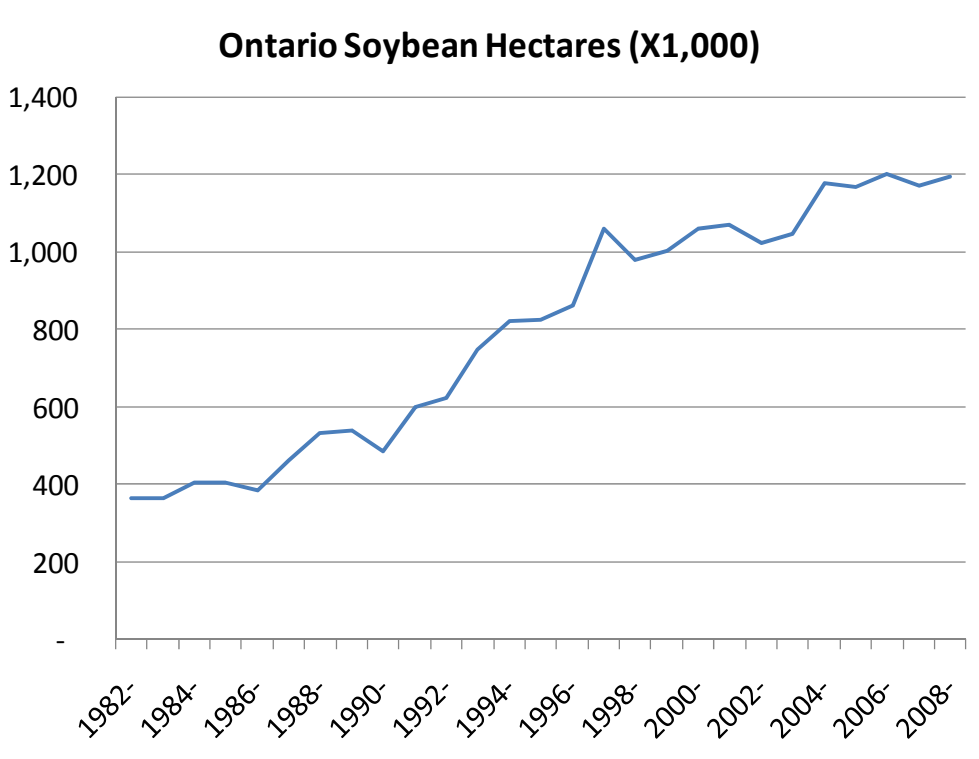
In addition, many growers also use no-till or minimum tillage in their operations and soybean fits in well with this practice. In Canada, approximately 55 percent of soybeans are no-tilled. An additional 15-20 percent is minimum tilled. Minimal and no-till management practices are helpful in promoting soil health through the build-up of organic matter. These management practices reduce erosion and increase organic matter and the presence of earth worms.

Another advantage of soybeans is that they are legumes. Soybeans can "fix" the nitrogen they need from the air. Microbes that colonize the roots of the soybean plant

take nitrogen from the air and convert it into a form the soybean can use to grow. This means that soybeans require less purchased nitrogen fertilizers, which is advantageous to producers.

The soybean crop in Canada has increased. This was initially due in large part to the advances in cultivar development coming out of the soybean breeding program Agriculture and Agri-Food Canada, Ottawa and followed by the University of Guelph as well as several private soybean breeding programs. New and successively earlier maturing soybean varieties have effectively created a new crop for central and eastern Ontario. By the early 1980s the area planted was less than 400 hectares and by 2008 the area tripled to more than 1.2 million (Figure 2).

Figure 2 Ontario Soybean Area Planted



Outside Ontario, there was also continuing expansion of the crop into Quebec and most recently into Manitoba. Ontario's seeded soybean acres in 2009 have risen 14.3% over 2008, to reach a new high of 971 thousand hectares, according to Statistics Canada's 2009 June Farm Survey (Table 6). The Ontario area seeded to soybeans has increased from 847.8 thousand hectares in 2008. The previous Canadian record set was 936 thousand hectares planted in 2005.

Table 6 Area Planted to Soybeans by Canadian Province ( ,000 hectares)  
 Source: "Field Crop Reporting Series" Catalogue 22-002, Statistics Canada

Year	Manitoba	Ontario	Prince Edward Island	Quebec	Central Canada	Maritimes	Western Canada	Canada
2000/01	0.0	904.5	2.2	154.0	1058.5	2.2	0.0	1060.7
2001/02	20.2	900.4	2.8	145.5	1045.9	2.8	20.2	1068.9
2002/03	52.6	835.7	3.0	132.5	968.2	3.0	52.6	1023.8
2003/04	89.0	805.3	2.3	150.0	955.3	2.3	89	1046.6
2004/05	44.5 (r)	930.8	3.2	199.0	1129.8	3.2	44.5 (r)	1177.5 (r)
2005/06	42.5	936.8	4.0	186.0	1122.8	4.0	42.5	1169.3
2006/07	141.6	862.0	4.6	193.0	1055	4.6	141.6	1201.2
2007/08	91.1	900.4	4.5	175.5	1075.9	4.5	91.1	1171.5
2008/09	111.3	847.8	7.3	229.0	1076.8	7.3	111.3	1195.4
2009/10	176.0	971.2	11.3	240.5	1211.7	11.3	176.0	1399.0

Looking at the twenty five year history of the supply and disposition of the soybean crop in Canada (Table 7) one can see that:

- 1) yields have increased or remained stable even though more of the crop is grown in shorter season areas of Canada and
- 2) exports of soybean have grown ten fold to more than 1.7 million tonnes (this is largely attributed to growth in the specialty or food grade soybeans). Despite a significant increase in the seeded area, Canada consistently imports a supply of oilseed soybean for crushing.

Table 7 Soybean Supply and Disposition

Source: Statistics Canada, Cereals and Oilseeds Review Series, Cat. No. 22-077

Canada: Soybean Supply and Disposition (Historical - 1982-1983/2008-2009f) 12-Dec-08												
Crop Year	Seeded Area (kha)	Harvested Area (kha)	Yield (t/ha)	Production (kt)	Imports	Total Supply (kt)	Exports	Food & Ind Use	Feed, Waste, Dock. (kt)	Total Dom. Use	Carry-out Stocks (kt)	Avg. Price \$/t
1982-	364	364	2.33	848	419	1,356	117	1,043	14	1,081	157	246
1983-	364	364	2.02	735	280	1,172	61	937	13	978	132	344
1984-	405	405	2.26	917	228	1,278	124	928	-20	937	218	270
1985-	405	405	2.5	1,012	175	1,404	173	894	194	1,114	118	243
1986-	385	385	2.49	960	217	1,295	147	953	14	1,032	115	232
1987-	461	461	2.75	1,270	151	1,536	188	958	218	1,212	136	309
1988-	533	533	2.16	1,153	159	1,448	294	855	99	990	164	310
1989-	540	540	2.26	1,219	287	1,670	193	1,102	151	1,286	191	237
1990-	484	484	2.61	1,262	164	1,617	213	936	218	1,193	210	225
1991-	598	598	2.44	1,460	72	1,743	252	975	283	1,301	190	228
1992-	643	622	2.34	1,453	226	1,869	211	1,000	494	1,544	114	265
1993-	752	748	2.6	1,945	57	2,116	492	1,060	415	1,530	94	309
1994-	821	821	2.74	2,254	67	2,415	542	1,122	527	1,704	168	272
1995-	826	824	2.79	2,298	70	2,536	599	1,220	494	1,773	164	357
1996-	876	862	2.52	2,170	232	2,565	478	1,424	512	2,007	80	382
1997-	1,062	1,060	2.58	2,738	149	2,967	769	1,583	361	2,010	188	333
1998-	981	980	2.79	2,737	254	3,178	876	1,576	444	2,088	215	266
1999-	1,004	1,004	2.77	2,781	455	3,450	949	1,712	426	2,249	252	256
2000-	1,069	1,061	2.55	2,703	431	3,386	747	1,650	692	2,454	185	256
2001-	1,082	1,069	1.53	1,635	982	2,802	501	1,671	352	2,129	172	269
2002-	1,030	1,024	2.28	2,336	651	3,159	723	1,762	419	2,291	145	308
2003-	1,051	1,047	2.17	2,268	587	3,000	914	1,500	319	1,947	140	395
2004-	1,229	1,178	2.59	3,048	393	3,581	1,122	1,610	457	2,190	270	248
2005-	1,176	1,169	2.7	3,161	339	3,771	1,316	1,493	338	1,959	495	220
2006-	1,214	1,201	2.89	3,466	240	4,201	1,600	1,535	511	2,171	430	262
2007	1,180	1,172	2.3	2,696		3,502		1,348				432
2008	1,202	1,195	2.79	3,336	300	3,758	1,725	1,400	231	1,763	270	350-450

Table 8 illustrates the soybean export destinations for the five year period: 2001/02 through 2005/06. Canada's major soybean buyers are in Asia and Western Europe and to a lesser extent, the Middle East.

Table 8 Canadian Soybean Exports (Tonnes)

Source: Statistics Canada, Ontario Soybean Growers

Country/Region	2001/02	2002/03	2003/04	2004/05	2005/06
Brunei Darussalam	0	0	0	19	19
China	3,367	2,254	15,299	13,001	7,617
Hong Kong	22,800	21,252	20,215	19,146	21,754
Indonesia	26,386	41	611	154	43,081
Japan	126,619	140,149	252,814	267,830	322,739
Korea, North	0	0	0	1,307	0
Korea, South	0	0	118	576	0
Malaysia	101,698	119,758	96,849	98,152	138,627
Philippines	4,275	0	4,132	9,026	12,253
Singapore	12,322	14,656	16,130	13,730	16,906
Taiwan	352	417	2,847	4,237	6,724
Thailand	3,986	6,370	4,656	4,077	7,805
Viet Nam	0	0	0	140	86
<b>Asia Total</b>	<b>302,445</b>	<b>311,988</b>	<b>413,672</b>	<b>431,396</b>	<b>577,611</b>
Austria	44	6	52	0	0
Belgium	18,299	12,524	91,093	63,323	130,677
Denmark	16	13,000	19,351	0	0
Finland	0	0	0	0	20,302
France	15,086	33,918	1,386	78,731	50,952
Germany	29,377	467	34,864	14,996	66,284
Ireland	0	0	0	44	78
Italy	8,656	29,547	1,025	1,295	4,450
Netherlands	3,105	34,178	138,346	95,880	63,756
Norway	0	0	0	0	0
Portugal	0	102	20	27,511	107,378
Serbia and Montenegro	0	0	0	0	21
Spain	157	40,123	10,053	17,136	17,008
<b>Western Europe Total</b>	<b>74,738</b>	<b>188,088</b>	<b>300,454</b>	<b>298,915</b>	<b>460,906</b>
Africa	17,248	424	491	18,039	24,388
Latin America/Caribbean	15,334	1,544	399	539	568
Eastern Europe	541	1,660	2,504	5,426	3,665
<b>Middle East</b>	<b>755</b>	<b>61,764</b>	<b>63,404</b>	<b>234,870</b>	<b>192,797</b>
Oceania	168	431	1,856	470	490
South America	40	39	0	77	292
United States	60,224	131,395	129,175	91,798	45,913
Northern America(exc.US)	0	0	0	26,159	128
<b>Total Exports</b>	<b>501,389</b>	<b>723,195</b>	<b>913,019</b>	<b>1,107,689</b>	<b>1,306,759</b>