

Reseeding open-pollinated canola varieties in Canada

**Prepared for the Manitoba Canola Growers' Association
by Strategic Vision Consulting Ltd.**

May 3, 2011

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The Manitoba Canola Growers' Association (MCGA) engaged Strategic Vision Consulting Ltd. (SVC) to compile a list of open pollinated canola varieties Canadian farmers may have the right to save and replant under the definition of farm saved seed. In this document, SVC will refer to these varieties as "free to reseed."

SVC has divided this report into four sections.

1. Means by which Canada protects seed intellectual property (IP) in Canada.
2. Methodology used to determine which canola varieties are currently registered by the Canadian Food Inspection Agency (CFIA) that may be reseeded as farm saved seed.
3. *Brassica napus* and *B. rapa* varieties that farmers may be free to reseed in Canada.
4. Additional observations provided by MCGA based on the observations included in the first three sections.

Many companies, university and government research personnel, as well as a range of canola experts working with and servicing the canola sector in Canada, were very helpful in helping to compile the information contained in this report, and deserve thanks for their input.

A. Protection of seed intellectual property

Canada protects Intellectual Property (IP) in the seed sector through five mechanisms:

1. The Canada Seeds Act¹
2. The Plant Breeders' Rights (PBR) Act
3. Patents
4. Technology use agreements or bag license agreements
5. Production contracts

1. The Canada Seeds Act

Generally speaking, the Seeds Act governs the use of variety names, grading factors and the production of pedigree seed.² Producers selling seed cannot use the variety name or allude to the name of the variety, but they may use general variety descriptors. Seed sold as common grade must meet Seeds Act grade standards. Seed vendors must have smaller seeded crops such as canola tested by an accredited lab and must label the seed appropriately. Based on the information gathered, those selling seed need not specify the level of seed germination, however, the purchaser has the right to ask for germination test results within one year of purchase and the vendor must provide test results within 30 days of receiving the request.

2. The Plant Breeders' Rights Act

It would appear that PBR allows plant breeders to protect new varieties by providing the owner an exclusive right to produce seed for sale and to sell reproductive material.³ The legislation protects the variety from exploitation by others and allows the owner of the IP to take legal action against those propagating and selling reproductive material without authorization. Canada's PBR Act provides 18 years of IP protection for new seed varieties.⁴ PBR includes a provision that allows producers the opportunity to save seed for replanting for their own use only.⁵

3. Patents

Legal precedent suggests that the Government of Canada grants patents that exclude others from making, using or selling a patented invention in Canada.⁶ Two Canadian court decisions appear to have expanded patent control over plants. While the Canadian Intellectual Property Office (CIPO) will not grant patents for multicellular living organisms such as plants,^{7,8} the Supreme Court has decided that while companies such as Monsanto had no right to patent a Roundup Ready[®] canola plant, it could exclude others from using Roundup Ready[®] plants without a license.^{9,10}

4. Technology use, technology stewardship, trait and bag license agreements

Based on observations gathered from public seed trade information, signing a Technology Use Agreement (TUA), a Technology Stewardship Agreement (TSA), a trait agreement, a bag license agreement or a similar legal agreement allows a producer to purchase a specific variety of seed containing one or more specific genetic traits. In turn, it appears that the producer agrees to abide by a number of conditions. For example, the Monsanto Company TUA is a contract that records the amount of Genuity[™] Roundup Ready[®] canola seed purchased by the crop producer, the

variety purchased and the number of bags of seed purchased that crop year.¹¹ The canola grower appears to have an obligation to pay a technology fee for each kilogram of seed purchased under the TUA or TSA.

5. Production contracts

Based on a review of information available to producers on production contracts, it appears that producers may enter into production contracts to grow specific canola varieties. These contracts have a number of terms attached, which may preclude the crop producer from saving seed and/or reseeding the variety. As an example, the Nexera™ contract specifies that only certified seed may be planted and that certified seed must be purchased from a designated retailer outlet.¹² In addition, the canola producer must return all unopened bags of certified seed to the point of purchase and must plant or destroy any certified seed in opened bags by a specific date within the current growing season.

Summary

The Canadian Seed Trade Association (CSTA) has created a table that specifies when crop producers have the legal right to save seed for replanting in Canada and under which conditions it would be illegal to do so (Table 1).

Table 1. When do crop producers have the legal right to save seed for replanting in Canada?

	Save seed and replant		Save seed and re-sell	
	Legal	Illegal	Legal	Illegal
Canada Seeds Act	X		If not sold by variety name	If sold by variety name
Plant Breeders' Rights (PBR)	X			X
TUA, TSA or bag license		X		X
Production contracts		X		X

Source: Canadian Seed Trade Association (modified)

- It would appear that it is illegal for crop producers to save and replant or save and re-sell seed grown under the terms of a TUA, TSA, bag license or production contract.
- The information provided by CSTA suggests that crop producers can save and replant seed protected under the Canadian PBR Act if it is for their own use only. Producers cannot save and re-sell seed protected by PBR.
- For seed that is not protected by TUA, TSA, bag license or PBR, the data presented in Table 1 suggest that seed can be saved and replanted or saved and sold, as long as it is not sold by variety name.

B. Methodology

SVC compiled a list of all canola, canola quality mustard and rapeseed varieties listed as registered in Canada by the Canadian Food Inspection Agency (CFIA) in five categories:¹³

- Canola, *Brassica napus* L., Spring
- Canola, Rapeseed, *Brassica napus* L.
- Oilseed, Spring *Brassica napus* L., Winter type
- *Brassica rapa* L. (*Brassica campestris*), Spring
- Canola Quality, *Brassica juncea*

SVC did not include hybrid canola varieties from three canola and rapeseed categories:¹⁴

- Canola, *Brassica napus* L., Oilseed, Spring hybrid
- Canola, *Brassica napus* L., Oilseed, Winter hybrid type
- Canola Quality, hybrid, *Brassica juncea*

SVC identified a number of issues with the Canadian Food Inspection Agency (CFIA) web site that may have created inconsistencies in the data summarized. The CFIA is classifying synthetic types of hybrid canola varieties as open pollinated *Brassica napus*. In addition, there are instances in which the CFIA lists the same canola variety in more than one category. Generally speaking, all categories are likely to be mutually exclusive, and each variety would probably be included in one category only. SVC has attempted to identify these discrepancies in this report. SVC contacted the CFIA and the CFIA acknowledged that there may have been inconsistencies in the data presented, but they did not currently have the resources available to review the data on their web site.

SVC then added all canola and rapeseed varieties from the *List of Varieties Registered for Production in Alberta 2010 Edition*¹⁵ that did not appear in the CFIA list of canola, canola quality mustard and rapeseed varieties, from six categories:

- Standard Argentine canola varieties:
 - Argentine canola – specialty oil
 - Herbicide tolerant Argentine canola varieties
 - Standard *B. juncea* varieties (canola quality)
 - Argentine rapeseed varieties
 - Standard Polish canola varieties

SVC did not include hybrid canola varieties from three categories:¹⁶

- Hybrid Argentine canola varieties with herbicide tolerance
- Hybrid Argentine canola varieties
- Hybrid *B. juncea* varieties (canola quality)

Based on the data available from the *List of Varieties Registered for Production in Alberta 2010 Edition*, SVC then identified all varieties protected in Canada under the Plant Breeders' Rights (PBR) Act by recording the date PBR was abandoned, revoked, surrendered or withdrawn, or the termination date on which PBR expired or would expire. SVC identified those varieties currently protected under PBR and those to which PBR no longer applies.¹⁷ The Canadian Food Inspection Agency web site notes that the applicant, holder, breeder and/or Canadian agent have applied for PBR on some registered canola varieties, but there is no indication that PBR rights have been granted. This exercise did not add value to the report since it appears that Canadian crop producers may reseed varieties protected under PBR as long as the seed is for their own use only, based on information presented in Section A.

Next, SVC identified all varieties that may have been sold at any time with TUAs, TSAs, trait agreements, bag license agreements or other legal agreements that preclude saving seed for replanting. Based on the information gathered, and through conversations with personnel at Monsanto Canada¹⁸, SVC included all canola varieties with tolerance to glyphosate (Roundup®) (Genuity™ Roundup Ready® or Roundup Ready® canola varieties). All of these varieties were excluded from the free to reseed category.

Based on publicly available data, SVC then attempted to identify, where information was available, varieties sold under production contracts. It is challenging to find much commercial information on older specialty oil varieties. It appears that currently, all High Erucic Acid Rapeseed (HEAR) varieties are sold through contracts with a crushing facility. Based on the limited amount of information available, and because it is unlikely that it would be possible to deliver older HEAR varieties through current contracts, SVC made the assumption that no older HEAR varieties would be free to reseed. Using the same rationale, SVC also assumed that older specialty canola varieties contracted as Nexera™ varieties or through the Cargill Specialty Canola Oils program would not be free to reseed.

SVC excluded all varieties from the free to reseed list where it was not possible to collect reliable primary data on the contract status of the variety in question. It would appear that Canadian producers are never free to save and reseed varieties where they have entered into production contracts that do not permit the saving and reseeding of the contracted variety. SVC also did not include varieties where publicly available information was lacking and when it was not possible to determine whether varieties were open pollinated or hybrids.

Based on information obtained from the CFIA’s web site, SVC also deleted a few varieties from the free to reseed list that the CFIA had registered as a canola varieties but where it appeared that the seed was never available commercially in Canada.

MCGC took this preliminary list of varieties and contacted the Canadian representative to get more insight into the status of each variety. In some cases, the Canadian representative indicated that the variety could not be reseeded because a contractual agreement precluded reseeding of the variety by the purchaser of the seed. Based on the information provided by each Canadian representative to MCGC, SVC removed these varieties from the free to reseed list.

C. Canola varieties free to reseed

Based on the information collected, it would appear that Canola producers may be free to reseed 12 canola varieties – four *B. napus* and eight *B. rapa*. The four *B. napus* varieties that may be free to reseed include AC Excel, Defender, Eagle and Roper.

***B. napus* varieties**

Variety	Canadian representative
AC Excel	SeCan Association
Defender	Bonis and Co. Ltd.
Eagle	Bonis and Co. Ltd.
Roper	TEC Edmonton

Based on information provided by the Canadian representative, three additional *B. napus* varieties may be free to reseed under specific conditions. Hi-Q, Peace and Q2, all University of Alberta varieties, may be free to reseed as long as the individual purchasing the seed did not enter into an agreement with the Canadian representative that precluded reseeding the variety. This agreement may have been in the form of a written contract, or the tag on the seed bag may have indicated that opening the bag meant that the purchaser of the seed had entered into a legal agreement with the seller of the seed. If there was no agreement in place at the time of purchase, seed of Hi-Q, Peace and Q2 canola varieties could possibly be saved and replanted.

Based on information provided by the Canadian representative, Canola producers may be free to reseed eight *B. rapa* varieties: AC Boreal, ACS-C7, ACS-C12, ACS-C18, ACS-C29, Reward, SW High Level and Westwin.

***B. rapa* varieties**

Variety	Canadian representative
AC Boreal	Saskatoon Research Centre
ACS-C7	Saskatoon Research Centre
ACS-C12	Saskatoon Research Centre
ACS-C18	Saskatoon Research Centre
ACS-C29	Saskatoon Research Centre
Reward	SeCan Association
SW High Level	Bonis and Co. Ltd.
Westwin	Bonis and Co. Ltd.

D. Observations based on the data collected

MCGA cautions against growing any of the *B. napus* varieties listed in Section C. Older *B. napus* varieties may lack the yield potential of newer varieties and may not have suitable resistance to a range of canola diseases such as blackleg (*Leptosphaeria maculans*), Sclerotinia root rot (*Sclerotinia sclerotiorum*) and clubroot (*Plasmodiophora brassicae* Woronin), among others. Growing these *B. napus* varieties may be more likely to lead to crop failure and MCGA cautions against growing these varieties.

Manitoba's canola producers grow very little *B. rapa* canola. Generally speaking, growers who choose to grow *B. rapa* in Manitoba may wish to consider choosing varieties that are current, high-yielding varieties with good vigour and suitable resistance to a range of canola diseases. Growing *B. rapa* varieties that do not meet these criteria may be more likely to lead to crop failure. MCGA would caution against growing any *B. rapa* varieties that may not be adapted to Manitoba's growing conditions, may not have a suitable complement of agronomic traits or may not have adequate resistance to a range of diseases and pests.

MCGA understands that data on the performance of canola varieties is available to farmers from a range of public and private sources.

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