



CANADIAN SEED TRADE ASSOCIATION

L'ASSOCIATION CANADIENNE DU COMMERCE DES SEMENCES

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June 11, 2009

Sandi Marshal
 Plant Breeders Rights Office

Dear Sandi:

In response to your request for information on the cost of infringements of Plant Breeders Rights, for the Department of Foreign Affairs and International Trade, CSTA staff have compiled the following information. Should you require any additional information, please contact our office.

The cost of infringement would be comprised of two things:

1. The loss of sales by the rights holder due to “brown bagging” or the sale of seed of protected varieties by unauthorized establishments or individuals;
2. The cost incurred to investigate and take action against those who are selling seed of protected varieties

The following table shows the results of a farmer survey done by Blacksheep strategy in 2005. It only includes a few crops, but the information can help us to draw some conclusions.

Crop	% of Seed Planted That is Certified Seed	% of Seed Planted that is Farm Saved	% of Seed Planted that is “brown bagged”
Wheat	17	76	7
Barley	21	66	13
Canola	92	6	2
Peas	14	74	12

In 2006, the George Morris Centre did work for the CSTA on a proposal for a tax incentive on certified seed. We used the numbers from that study for prices of certified seed and for the acreages seeded to various crops. We calculate that with the 2006 price of certified seed and acreages, **the income forgone as the result of brown bagging of wheat, barley and peas was about \$9.1 million.** We were not able to obtain numbers for the the costs of enforcement, but that would have to be added to the total to get the cost of actual infringement for these crop kinds. In order to be really accurate, one would also have to include the costs of infringement for other crops – but we were unable to get numbers for brown bagging, or prices etc. for other crops.

When the Canadian Plant Technology Agency was first formed and started its monitoring and enforcement work, infringements were more frequent than they are now or even when these numbers were generated. However, many of PBR holders who did go down the path to enforcement of their rights found that in many cases the cost of enforcement was not justified by the penalty that was ultimately paid by the infringer. Where it is possible, many variety developers have turned to intellectual property protection tools other than Plant Breeders' Rights.

The table below shows interesting trends. The use of PBR has been low but steady for cereal crops like wheat and barley, where low investment has not resulted in a substantial number of new varieties, and where PBR is the only tool to protect the IP. For peas, the number of rights granted has declined. This decline coincides with the withdrawal of the private sector from investments in research and breeding for these crops. Soybean varieties protected by PBR are almost all conventional or non-Genetically modified. Canola shows an interesting story as well. The increased grant of PBR in some periods is the result of PBR applications to protect the inbred parental lines used to create hybrids, which is the most effective form of IP protection for crops that lend themselves to it.

Plant Breeders' Rights Granted

	Barley	Canola	Peas	Wheat	Soybeans
January 2007	1	2	1	0	1
April 2007	0	0	1	1	1
July 2007	0	11 (6 were inbred lines)	0	1	0
October 2007	3	0	5	2	0
January 2008	2	0	3	3	1
April 2008	1	9 (5 were inbred lines)	0	0	0
July 2008	0	5 (inbred lines)	0	3	0
October 2008	2	3	1	1	2
January 2009	1	1	0	0	2
April 2009	0	0	0	3	0

For like

crops

canola, corn, and soybeans, which lend themselves to different ways to protect intellectual property, such as hybridization (in the case of canola and corn), and patenting of traits and genes (all three of these crops lend themselves to this form of IP protection.) PBR is not a preferred IP protection tool, except for, as noted, the protection of inbred lines used to create hybrids. It's interesting to note that by far the largest portion of private sector investment is in these three crop kinds. A recent CSTA member survey found that by 2012 over 95% of private sector investment in plant breeding and research will be in these three crops.

Cereal crops and pulse crops don't lend themselves to other forms of Intellectual Property protection, so you see from the table that the use of PBR has remained quite consistent. However the story to tell there is the reduction in private sector investment. While cereals occupy the greatest acreage in Canada, private sector investment in plant breeding and research will be only 2% of total investments in 2012. Farmers and industry alike rely on the public sector to carry out research and development for these crop kinds, and we know that public sector budgets are constantly and increasingly under pressure.

So, the real story to tell is not the cost of infringement of PBR, but the cost of our outdated PBR system to innovation for farmers and all of Canada. Without effective tools to protect intellectual property, potential investors can't recover their costs, and as a consequence, private sector plant breeding and research is going to crops where there are more effective IP tools available. In addition, international investors, looking for somewhere to do their plant breeding, are not likely to invest in Canada, where they don't have the same opportunities to protect their IP as is available in other countries.

I hope that this provides the information that is being sought by DFAIT.

Sincerely
Patty Townsend
Vice-President