

So, Who Really Won the Schmeiser Decision?

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The headlines reported a Supreme Court Decision in favor of Monsanto in their 21 May judgement on the Schmeiser v. Monsanto case (<http://www.lexum.umontreal.ca/csc-scc/en/index.html>)

But what exactly did Monsanto win? Indeed, *did* Monsanto ‘win’, or was it at best, the weakest possible victory - a 5 to 4 decision - on just one of the two contentious issues, with a significant loss on the other?

The text of the Decision illustrated the depth of the disagreement among the judges. The very first sentence of the judgement was:

“Held (Iacobucci, Bastarache, Arbour and LeBel JJ dissenting in part): The appeal should be allowed in part”.

Because Schmeiser was the **appellant**, ‘partial support for the appeal’ means a split Decision, with winners and losers on both sides.

To analyze this pivotal Decision, I’d like to first work through the two issues, and then discuss some of the implications that lead from the Decision.

What Were the Issues?

Issue 1. The first part of the Decision was financial in nature and pertained most directly to the Schmeiser family. At issue was a lower court judgement which had handed over the full value of Schmeiser’s 1997 canola crop - roughly \$19,000 - to Monsanto, and further saddled the lone farmer with all of Monsanto’s legal fees - which amounted to \$153,000 just for the first hearing. Submission of Monsanto’s legal bill to Schmeiser was also the first revelation that Keith Downey, a retired AAFC (Agriculture and Agri-Food Canada; analogous to the USDA) employee who still retains an office at the AAFC research station at Saskatoon, had testified against Schmeiser as a paid member of the Monsanto team.

On this first issue, the nine judges agreed with the argument framed by Schmeiser’s lawyer Terry Zakreski. Because Schmeiser had not sprayed Roundup, he had not benefitted in any way from the presence of Monsanto’s uncontrollable RR gene. As no part of the value of his crop could therefore be attributed to the RR gene, Monsanto was owed none of the value of the crop. Remember this key point, as it will be shown to be important, and not just to Schmeiser.

Furthermore, in a particularly unusual move, the Supreme Court also concluded that Schmeiser should be relieved of responsibility for paying Monsanto’s now quite considerable legal bills

over the entire 7 year process. The ‘loser’ in such cases is almost always obliged to absorb the legal costs of the winner. But not in this contentious, 5-4 decision. Interesting.

The most direct effect of the Supreme Court Decision was that Zakreski’s stellar arguments had saved the home and livelihood of the septagenarian Schmeisers. Monsanto had already taken out writs against their home, farm, and business, and had the Decision been otherwise, would have rendered this courageous farm family not simply destitute but homeless.

Issue 2 The second issue pertained to the elasticity of Monsanto’s interpretation of the Canadian Patent Act. Five of the nine Supreme Court judges ruled in direct opposition to their own Oncomouse Decision (http://www.lexum.umontreal.ca/csc-scc/en/pub/2002/vol4/html/2002scr4_0045.html). The 2002 Supreme Court Oncomouse Decision reaffirmed the 1982 Abitibi (Patent Appeal Board) ruling that higher life forms cannot be patented in Canada. Specifically, the Dec 2002 Supreme Court Decision states:

“Held (McLachlin C.J. and Major, Binnie and Arbour JJ. dissenting): The appeal should be allowed. A higher life form is not patentable because it is not a "manufacture" or "composition of matter" within the meaning of "invention" in s. 2 of the Patent Act.”

Now, 18 months later, five of the nine justices ruled that higher life forms containing a single patented gene are effectively the property of the owner of the single patented gene. The distinction between this position and the rejected argument of Harvard University in seeking to patent higher life forms in the Oncomouse case is difficult to discern.

How the gene got into the higher life form - in this case a canola plant - was irrelevant to the Supreme Court. The simple presence of one patented gene conferred ownership over the entire plant. The disinclination of the Supreme Court to consider the ‘how’ issue generated a range of pragmatic agronomic incongruities, some of which are discussed below

In sharp contrast, the dissenting four Supreme Court judges concurred with the tightly reasoned argument laid out by Zakreski. The actual Canadian patent which protects Monsanto’s RR gene explicitly limits the protection to the **gene** and the **cell** containing it - not to the whole plant or seed. In contrast, the US patent for the same RR gene extends to the whole plant, consistent with the Diamond v Chakrabarty Decision of 1980 by which the US Supreme Court allowed the patenting of higher life forms in the US (<http://caselaw.lp.findlaw.com/scripts/getcase.pl?court=us&vol=447&invol=303>):

Held: A live, human-made micro-organism is patentable subject matter under 101. Respondent's micro-organism constitutes a "manufacture" or "composition of matter" within that statute. Pp. 308-318.

The actual Canadian patent has 51 claims, all of which are limited specifically to the gene, the

processes relating to making the gene, and the cells of various crop species, including canola. Indeed, by not including whole plants, the judges argued that Monsanto had specifically *disclaimed* whole plants in their patent, as indeed, they *had* to because patenting of higher organisms is disallowed in Canada.

As a result, in their strongly worded dissent, 4 of the 9 judges in the *Schmeiser v. Monsanto* case affirmed the unpatentability of higher organisms, as per their own *Oncomouse* Decision in 2002. They concluded that a reasonable and knowledgeable person could not expect patent protection to be “extended to unpatentable plants and their offspring”. The four dissenting judges agreed that *Schmeiser* did not ‘use the invention as construed in the claims’ - e.g. he did nothing to the process, the gene, or the cells of plants, and hence, did not “....deprive the patentee of his monopoly over the use of the invention as construed in the claims.”

In effect, they agreed that the patent which had been approved under the Patent Act was intended to safeguard intellectual property prior to commercialization - only. Because Monsanto had specifically disclaimed plants in their patent, *Schmeiser* did not infringe upon Monsanto’s patent when he saved his contaminated seed for re-use the following year.

What are the Downstream Implications for Monsanto?

What will Monsanto be able to do now, that it couldn’t or didn’t do before? Not much.

1. *Intellectual Property*. Monsanto has consistently played by their own rules, although their interpretation of the Patent Act has now been legitimized by 5 of 9 Supreme Court justices. Monsanto has chosen to take action against Canadian farmers based on whole plant contamination, despite specifically disclaiming this intent in their actual Canadian patent. Now they can continue to do this legally.

Monsanto justifies this behavior as essential to protect their intellectual property. That must be a revelation to the other two companies which market herbicide tolerant canola in Canada, neither of which employs the Patent Act to protect their intellectual property nor feels compelled to prosecute farmers whose fields are inadvertently contaminated with their patented genes.

a. Bayer (formerly Aventis) protects its Liberty Link canola (tolerant to glufosinate ammonium) by placing the herbicide tolerant gene in hybrid canola. Because hybrids segregate non-uniformly, farmers have no incentive to save the seed of a hybrid canola crop, any more than they would save the progeny of hybrid corn. And of course, unlike Monsanto’s Roundup, for which the patent has expired, Bayer’s Liberty is still protected under patent. It is the sale of the herbicide which is the real cash cow for those marketing herbicide tolerant crops.

b. The other player in Canadian herbicide tolerant canola is Pioneer, which protects its mutagenized Clearfield cultivars (tolerant to imidazolinone) with the Plant Breeders Rights Act - just as it was intended to be used.

Monsanto's claim that the Supreme Court Decision will somehow open the floodgate on investment in GM technology in Canada asks the public to believe that uncertainty about patent protection is a disincentive to industry investment in Gm in Canada. This claim appears to be at variance with the experience of Bayer and Pioneer, who have managed to work within the existing rules.

It is equally inconsistent with the growing societal rejection of GM crops around the globe, including countries which allow patenting of higher life forms. Examples of societal rejection of GM crops as an unwanted and unwelcome intrusion into the food system - all of which occurred just in the first months of 2004 - include:

- the withdrawal of GM sugar beet by both Monsanto and Syngenta in the **EU**; GM sugar beet as well as GM canola were found to be more environmental damaging than non-GM cultivars in the multi-year, multi-farm Field Scale Evaluation (FSE) trials published in the Philosophical Transactions B of the Royal Society (16 October 2003)
- the withdrawal of GM maize by Bayer in the **UK** this spring; although GM maize was the only crop found in the FSE trials to be less harmful than the atrazine-based non-GM maize system, the regulatory protocols in place for growing GM maize were found to be too onerous to permit commercialization
- the March 2004 passage of 'Measure H' by the citizens of Mendocino County, **California** to ban the growing of GM crops in the county.
(<http://www.foodfirst.org/media/press/2004/2004-03-03-mendocino.html>)
- the unanimous (78-0) March 2004 vote by the **Vermont** senate to pass the *Farmer Protection Act*, under which biotech companies will be held liable for contamination of crops with GM traits (<http://www.organicconsumers.org/ge/vtlaw031104.cfm>)
- the April 2004 signing of the *Farmer's Right-to-Know Seed Labeling Bill* (H-777) by the governor of **Vermont**, which defines GM seed as different from conventional seeds in the state of Vermont seed statute, and requires labeling of all GM seeds sold in the state.
- the April 2004 decision by **Spain** - the only EU country allowing commercial production of GM crops - to withdraw approval for Syngenta's Bt176 maize, owing to concerns about transmission of antibiotic resistance
(<http://quote.bloomberg.com/apps/news?pid=10000085&sid=aTHzBgQCkUvs&refer=eu rope>)
- the April 2004 decision by President Chavez of **Venezuela** to ban GM soy
- the April 2004 decision of the **California** Department of Food and Agriculture (CDFA) to reject the application of Ventria BioSciences to grow pharmaceutical GM rice in California (Winnick, 2004)
- the 27 May 2004 introduction of a bill in **Ohio** designed to ensure the right to save seed and reduce production costs while compensating companies for reuse of the seed
- the May 2004 decision of Monsanto to withdraw from commercializing RR wheat in **Canada and the US** (Unger, 2004; see also <http://www.monsanto.ca/news/news-display.shtml?pfl=news-display-single.param&op2.rf1=23>) although the application is still pending at the CFIA
- the May 2004 withdrawal of Monsanto from GM canola trials in **Australia** (Marino,

2004), following decisions by 4 of 7 Australian states - Western Australia, Victoria, New South Wales, and Tasmania - to ban or restrict commercial GM canola trials for 1 or more years

- the June 2004 withdrawal of Bayer from GM canola trials in **Australia** (ABC, 2004)

Given mounting societal opposition, the impact of the Supreme Court of Canada's Decision in the Schmeiser v. Monsanto case on GM crop investment in Canada remains to be seen.

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2. *Marketing Strategy*. Employing the Patent Act rather than the Plant Breeders Rights Act was arguably more effective at enabling intimidation to expand market share than in protecting intellectual property. Because canola pollen and seed are uncontainable, the unintentional arrival of patented genes is a virtual certainty for every Western Canadian farmer. Because farmers as well as Monsanto know this, Monsanto could plausibly threaten legal and financial claims against virtually any farmer for 'infringement' simply because virtually every piece of land is likely to be the unwitting host for patented gene-bearing seed and plants.

However, by determining that Monsanto was owed none of the value of Schmeiser's crop, the Supreme Court removed or at least rendered shaky, this pivotal leg from the Monsanto marketing platform. Thus, a farmer who inadvertently infringes on Monsanto's patent may no longer need to fear losing their crop, home, and farm.

What are the Implications for Farmer/Growers, Heritage Seedsavers, etc?

1. *What about the rights of private land owners?* What if the plant that happens to become infected with a patented gene is on land owned by someone under no contractual obligation to Monsanto? Does ownership of a patented, uncontainable gene take precedence over ownership of land? Apparently so. The uncontainability of the gene was seen as an irrelevancy to 5 of the 9 judges, which leads to a related question.

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2. *What about externalized costs?* Why should someone under no contractual obligation to Monsanto be obliged to absorb 100% of the cost and responsibility for mitigating against uncontainable patented genes? By declining to consider the issue of containability, the 5 of 9 judges effectively forced everyone who does not sign a Monsanto TUA to accept legal responsibility for identifying contaminants and reporting them to Monsanto. Failure to do so incurs liability, just as it did for Schmeiser. Recall that he was not found guilty of theft - only of saving and regrowing seed he knew to be contaminated instead of calling Monsanto to come and fetch it. How he - as a seedsaver - was expected to do this in back-to-back canola was not specified in the judgement.

The fairness of externalizing costs to everyone else, to allow Monsanto to maintain some vestige of control over an uncontainable technology, is unclear.

Carrying this Decision to its logical conclusion will require every grower/farmer/rancher to make multiple annual reports, not simply to Monsanto, but to every proprietor of a patented gene. Why ranchers or vegetable growers? If the 5 of 9 judges considered that Schmeiser deprived Monsanto of its monopoly - infringed - simply by the presence of a patented gene, even if he didn't engage the utility of the patented gene, then might this not apply to everyone, whether or not they grow canola? By the same reasoning, although this case dealt with a Roundup Ready gene, presumably the same intellectual property protection would be equally applicable to a gene for oil quality or disease resistance, and for every company - not just Monsanto?

Perhaps the most prudent form of self-protection would be for every grower/farmer/rancher in western Canada to make a point of sending a form letter to every proprietor of a patented canola gene on an annual basis, informing them of the possibility that their gene(s) was present on their land and asking them to come and remove it. A particular day could be designated as the annual **Avoid Patent Infringement Day** - perhaps 1 April. Advertisements in the farm and market gardening press could remind everyone to send in their letters by registered mail, to ensure that they were protected against charges of knowing infringement, given that everyone will know of the likelihood for at least some errant seed on their land.

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3. *What about seedsavers?* What about the tens of thousands of genes in a canola plant that are not 'owned' and forcibly inserted into the genome but were instead selected through conventional plant breeding, including the traditional work of generations of farmer/seedsavers? **Does one patented gene trump centuries of work by all of these public as well as private breeders - globally? Does one patented gene confer ownership over everyone else' 'public good' work?** Apparently so. This leads to subsidiary questions.

a. Does a single contamination event permanently contaminate self-saved seed, making the seedsaver who grows out their own seed a permanent infringer?

Apparently yes. The only way to resolve this liability is to destroy your seed - all of it - because there is no way to distinguish contaminated from uncontaminated seed without spraying Roundup, which would itself kill all the uncontaminated seed. If carried to its logical conclusion, this Decision means that you - and every other grower/farmer on the planet - would eventually be obliged to destroy every seed (of crops which have been genetically modified) that was not intentionally fitted with a patented gene(s), to avoid charges of patent infringement. Recall that none of the Decisions made in the Schmeiser case stipulated the degree of contamination that was actionable. Is 25% too much? 1%? 0.1%?

But given the other half of this Supreme Court Decision, does this implied, unavoidable, permanent liability really matter? If the same logic which the Supreme Court applied to Schmeiser pertains to other farmers, then what can Monsanto do if it finds its patented gene in your bag of seed or growing in your heritage plant patch? By this logic, the simple growing and regrowing of your contaminated seed - which is what Schmeiser did and which the Court found to be infringement upon Monsanto's monopoly - would not oblige you to pay Monsanto

anything, presuming of course that you are not benefitting from the RR gene by spraying Roundup. What would Monsanto have to gain by hauling you into court, as they did Schmeiser, simply to incur legal fees which Monsanto would have to pay themselves, without the expectation of extracting unwarranted TUA, crop value, or punitive costs?

So, does this Decision threaten seedsavers and seedsaving? Perhaps not. The determination that Monsanto was owed no fraction of the value of Schmeiser's crop may, in fact, be an effective countervail to the technical finding of patent infringement.

b. Who 'owns' a plant that contains more than one inadvertent patented gene?

Such plants are already in existence now, and could become increasingly common if agricultural biotechnology actually does deliver other GM traits. Friesen et al. (2003) at the University of Manitoba compared 33 seed lots of certified canola seed for contamination with one or more of the three commercially available herbicide-resistance genes (glyphosate- and glufosinate-resistance, as well as non-GM imidazolinone-resistance (IR)). Of the 33, 18 seedlots were supposed to be non-herbicide tolerant, 8 were glufosinate-resistant, and 7 were IR seed lots. No glyphosate-resistant cultivars were sampled, because farmers are contractually prevented from providing seed to third parties for any reason, including research. They found that 7 of 33 seedlots (21%) contained individual seeds bearing both glyphosate- and glufosinate-resistance (the same plants survived both sprays), of which 3 seedlots exceeded the 0.25% standard of purity for certified canola seed. And keep in mind, these are certified seed lots, from certified seed growers, who are specialists at maintaining genetic integrity. So - who *owns* the doubly-contaminated seed? This degree of already existing dual-contamination raises questions about the practical workability of the Supreme Court Decision in an era with multiple patented genes travelling uncontainably across the continent.

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4. *What about contaminated certified seed?* The same paper by Friesen et al. (2003) determined that 42% of the 33 tested seedlots of certified canola were in fact contaminated above the allowed 0.25% threshold for same-crop contamination in certified canola. Recognizing that it is impossible to wholly segregate GM from non-GM seed, companies routinely put a disclaimer on every sack of non-GM seed of a genetically modified crop, such as that which has been on Pioneer Hi-Bred non-GM soybeans since at least 2000 (<http://www.nelsonfarm.net/validation.htm>):

"...grain traits can be mingled mechanically in the grain handling process or genetically in the course of pollination. Thus 100% purity, either in genetic make-up or in the absence of foreign material content is currently not achievable for any agricultural product, including soybean seed"

Should you worry about such a little bit of contamination? Van Acker et al. (2003) estimated that seeding certified canola seed at the upper limit of allowable same crop contamination (0.25%) could result in 1 herbicide tolerant volunteer canola plant per 1.3 m² (7700 plants ha⁻¹) the following year, given reasonable assumptions of yield and shattering losses. For pictures of

just such a situation, see <http://www.percyschmeiser.com/contamination.htm> . If you plant back-to-back like Schmeiser, then those volunteers will be indistinguishable from your sown canola plants. If you are a seedsaver like Schmeiser, the contaminated progeny seed will go into the bin along with everything else, making you an infringer when you plant them out again.

So, who is liable when GM seed arrives as a contaminant in a sack of non-GM seed? The disinclination of the Supreme Court judges to acknowledge the implications of the uncontainability of patented canola genes means that **you** are liable, just like Schmeiser. According to this Decision, it would not matter if the GM seed arrived as an inadvertent contaminant in a sack of non-GM seed, or through wind-swept windrows from a neighbor or through pollen transfer.

Conclusions

So, what, in the end, did Monsanto actually ‘win’? And did their win outweigh their losses in this pivotal case?

They won legal authorization, by 5 of 9 Supreme Court justices, for doing what they were already doing with their elasto-patent. The 5 agreed that plants containing their patented gene were theirs, regardless of where they were found or how they got there. OK. So what does this let Monsanto do that they weren’t doing already? Arguably, not much.

What did they lose? Arguably, quite a lot. Quite apart from losing their own accumulated court costs as well as the value of Schmeiser’s 1997 crop, their ability to threaten financial reprisals to inadvertent infringers was lost or greatly weakened. Hopefully, the arrival of Monsanto’s investigators on the doorstep of guiltless farmers will soon be a thing of the past.

But of greater long term importance, Monsanto’s behavior toward Schmeiser and hundreds of other farmers has now been exposed to the world. The Amnesty International approach of ‘the world is watching’ is a powerful deterrent to abuse of power, whether in prisons or on isolated farms. Through countless speeches, in unnumbered countries, over the past 7 years, Schmeiser informed, mobilized, and integrated an ever widening circle of people - who are going to have to pay the downstream costs of GM technology - into this unfolding story. Everyone from environmentalists, scientists, and homemakers, to elevator operators, religious groups, grocery chain operators, food processors, and policymakers has now been awakened to the implications of farming as envisioned by Monsanto. Externalized effects on non-adopting farmers, on seedsavers, on the integrity of heirloom varieties, on narrowing crop biodiversity, and on property rights have now been exposed for all to see, to debate, and to act upon.

By broadening the impacted and engaged community, the Schmeisers have effectively shifted the balance of power between Monsanto and farmers, to the great and lasting benefit of farmers.

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