

IN THE SUPREME COURT OF CANADA
(On Appeal from the Federal Court of Appeal)

B E T W E E N:

**PERCY SCHMEISER and
SCHMEISER ENTERPRISES LTD.**

Appellants
(Appellants)

- and -

**MONSANTO CANADA INC. and
MONSANTO COMPANY**

Respondents
(Respondents)

- and -

**COUNCIL OF CANADIANS, ACTION GROUP ON EROSION, TECHNOLOGY AND
CONCENTRATION, SIERRA CLUB OF CANADA, NATIONAL FARMERS UNION,
RESEARCH FOUNDATION FOR SCIENCE, TECHNOLOGY AND ECOLOGY and
INTERNATIONAL CENTER FOR TECHNOLOGY ASSESSMENT;
THE CANADIAN CANOLA GROWERS ASSOCIATION; AG-WEST BIOTECH INC.;
THE ATTORNEY GENERAL FOR ONTARIO; THE CANADIAN SEED
TRADE ASSOCIATION; and BIOTECCanada**

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OVERVIEW

1. This is a case of first impression concerning the Respondent Monsanto's claim of patent infringement with respect to a genetically modified gene or cell. This appeal
5 requires the Court to determine the appropriate approach to patent validity, construction of patent claims and patent infringement in the unique context of patents for genes and cells which may be inserted in higher life forms, in this case in certain plants which are self-replicating. The Court must also confront the question of whether a patent can be infringed where the alleged infringer has not made use of or benefited from the properties of an
10 invention which make it useful.

2. The issues raised in this appeal are of particular significance because the release of genetically modified seeds and plants containing patented genes and cells into the environment is a recent phenomenon with far reaching implications for farming practices,
15 markets for agricultural commodities, biodiversity, and the environment. This Court's decision will have broad legal, practical, and policy implications for a relatively new sphere of scientific endeavour. Because biotechnology is global in scope, judicial decisions concerning intellectual property rights to genetically modified organisms can have considerable influence on policy makers, regulators, and international agencies and
20 institutions, including those involved in dealing with the complex inter-relationships between biotechnology, biodiversity, agriculture and public health.

PART I - STATEMENT OF FACTS

3. The Interveners adopt and rely on the facts set out in the Appellant's factum. In
25 addition, the Interveners rely on the following facts.

4. The Court below found that the Appellant infringed Monsanto's patents to certain
30 genetically modified genes and cells, by: 1) planting seed saved from the previous years crop, which he "knew or ought to have known" to be resistant to a particular glyphosate herbicide (included one marketed by Monsanto under the brand-name "Roundup"); and 2) selling seed harvested from that crop. However, the Court also found that the Appellant

had never purchased seed resistant to Roundup, and did not spray his 1998 crop (alleged to have been grown and sold in contravention of Monsanto's patent) with Roundup or any other glyphosate herbicide. Moreover there was no finding in the Courts below that the Appellant played any part initially in causing glyphosate resistant canola plants to grow on his land and from which seed was saved for his 1998 crop.

Decision of the Court of Appeal, paras. 18, 58

5. Notwithstanding the title of its patent "Glyphosate-Resistant Plants", Monsanto does not have a patent to any plant or seed that is resistant to the application of glyphosate herbicides. Indeed, it has been the consistent the policy of Canada's Patent Office not to issue patents to seeds, plants or other higher life forms, and there is no evidence that it has ever issued such a patent. Rather, Monsanto's patent is to genetically modified plant genes and a plant cells comprising those plant genes.

Decision of the Court of Appeal, para. 8

6. The canola seeds and plants, into which Monsanto's patented genes or cells have been inserted, are self replicating. Through the natural process of cross pollination, they may become incorporated into other canola plants. When this occurs, canola plants in which the genetically modified gene is present are entirely indistinguishable from those which do not have that gene, with the singular exception of their reaction to a glyphosate herbicide. As the Court of Appeal noted:

It is undisputed that a plant containing the Monsanto gene may come fortuitously onto the property of a person who has no reason to be aware of the presence of the characteristic created by the patented gene.

Decision of the Court of Appeal, para. 57

7. Monsanto was fully aware of the propensities of its invention to spread through the environment and interact with other living organisms.

Cross-exam A. Mitchell, *Appellant's Record*, Vol. IV, p. 600 (20-30)

PART II - INTERVENERS' POSITIONS ON THE POINTS IN ISSUE

8. The Interveners submit that the Court below:

- 5 a. erred in holding that Monsanto was entitled to a patent in genes and cells;
and in the alternative
- b. failed to construct Monsanto's patent in a purposive manner;
- 10 c. failed to construct Monsanto's patent claims in a manner that was
reasonable and fair to the public;
- d. erred in finding that the Appellant infringed Monsanto's patent, even though
the Appellant had never constructed, used, made use of, or sold Monsanto's
15 genetically modified gene and cells;
- e. erred in awarding damages against the Appellant, even if there was an
infringement of the patent, since the Appellant did not benefit from any such
infringement.
- 20

PART III - THE LAW

9. The Appellant submits that the subject matter claimed by the patent, namely
chimeric plant genes and cells comprised thereof, lie outside the *Patent Act*, RSC 1985,
25 c. P-4. He further argues that a universal plant cell is not a lower life form within the
meaning of that term as defined by this Court in the *Harvard College* case and may not,
therefore, be patentable. The Interveners support and adopt those submissions.¹ The

¹ As Professor Siebrasse notes in his discussion of the decision below, "...[A]ll of the policy considerations which led the majority [in *Harvard College*] to a restrictive definition of 'invention' appear to arise just as forcefully whether the patent is for a plant *per se* or for every cell of which the plant is comprised. This suggests Monsanto's patent may be invalid": Appellant's Authorities, Vol. 2, Tab 42, at p. 5.

Interveners' following submissions proceed on the alternative basis that, contrary to this position, Monsanto's patent in the chemeric genes and cells is deemed to be valid.

A. Failure to Construct the Patent in a Purposive Manner

10. As Monsanto conceded and the Courts below correctly acknowledged, the subject of Monsanto's patent was a genetically modified gene or cell that might be inserted into the genome of a canola seed or plant. Nevertheless, it is clear from the way the question of infringement was addressed that the Courts below failed to adequately address the distinction between patent in a gene or cell, on the one hand, and a patent in a seed or plant, on the other. This, in turn, led the Courts to conflate Monsanto's monopoly rights to genetically modified genes and cells with those that might attach to a patent it did not have, and which this Court has already determined it could not obtain, namely a patent to genetically modified canola seeds and plants, which are higher life forms, which caused the Courts to err in finding the Appellant to have infringed the patent.

Harvard College v. Canada (Commissioner of Patents), 2002 SCC 76 [Appellant's Authorities, Vol. 1, Tab 2]

11. In a claim for infringement, the first step in ascertaining the scope of the monopoly accorded by the *Patent Act* is to construct the patent in a purposive manner, having regard to the entire patent specification in order to determine the nature and essential features of the invention:

... a patent specification is a unilateral statement by the patentee, in words of his own choosing, addressed to those likely to have a practical interest in the subject matter of his invention (i.e. "skilled in the art"), by which he informs them what he claims to be the essential features of the new product or process for which the letters patent grant him a monopoly. *It is those novel features only that he claims to be essential that constitute the so-called "pith and marrow" of the claim. A patent specification should be given a purposive construction rather than a purely literal one* derived from applying to it the kind of meticulous verbal analysis in which lawyers are too often tempted by their training to indulge. [emphasis added]

Whirlpool Corp. v. Camco Inc., [2000] 2 S.C.R. 1067, at p. 1090 (quoting Lord Diplock in *Catnic Components Ltd. v. Hill & Smith Ltd.*, [1982] R.P.C. 183 (H.L.)) [Appellant's Authorities, Vol. 2, Tab 22]

12. As noted by this Court, the purposive approach to construction described by Lord Diplock is consistent with the approach to claims construction previously adopted by the Court and described by Dickson J. (as he then was):

5 We must look to the whole of the disclosure and the claims to ascertain the nature of the invention and methods of its performance ... being neither benevolent nor harsh, but rather seeking a construction *which is reasonable and fair to both patentee and public*. [emphasis added]

10 *Whirlpool Corp, supra*, at p. 1095 (citing *Consolboard Inc. v. MacMillan Bloedel (Sask) Ltd.*, [1981] 1 S.C.R. 504)

13. The nature and essential features of a patent to a genetically modified gene or cell are fundamentally distinct from those associated with a patent to a seed or plant (even if such a patent could be permitted at law which it cannot). A purposive construction of Monsanto's patent requires that a clear distinction be maintained, both at the level of patent definition and carried through to the issue of patent infringement, between a patent to a gene or cell, and one to seed or plant, for three reasons.

20 **(i) Genetically Modified Genes and Cells are Distinct Biological Organisms**

14. A gene or cell may not be patented unless it can, through technological means, be isolated from the organism in which it naturally occurs, such as a seed or plant. A chimeric² plant gene is one that has been artificially created, typically using multiple sources of plant, viral and bacterial DNA. It is not a self-sustaining life form.

30 Gold, E. Richard, *Patents in Genes*, prepared for the Canadian Advisory Committee Project Steering Committee on Intellectual Property and Patenting of Higher Life Forms (Ottawa: Canadian Biotechnology Advisory Committee 2000), pp. 2-4 [Appellant's Authorities, Vol. 1, Tab 11]

² The word "chimeric" derives from the Greek mythological monster the Chimera having a lion's head, a goat's body, and a serpent's tail.

15. When Monsanto's chimeric gene is inserted into a canola plant cell, it becomes one of approximately 40,000 genes that comprise the genome³ of that plant. The genetically modified genes and cells at issue contribute nothing to the germination, growth, maturation, or seed production of the plant into which they may be or become incorporated. Their only utility is to convey glyphosate resistance to a such plant if and when that plant is sprayed with the glyphosate herbicide.

Decision of the Court of Appeal, para. 42

16. Indeed, it is plant breeding and selection by generations of farmers which has over time contributed to the value of an agricultural plant such as canola. In North America, the genome of many other agricultural plants are also the product of decades of public investment in plant selection and breeding. As described by one knowledgeable commentator:

The plant genome is a unique entity to the law. It has contained within it the complete set of instructions to reproduce itself with only elemental raw materials as inputs. To date, man has been unable to construct any mechanical or biological device which simulates the ability of the plant genome to both reproduce itself and carry all the information necessary to generate a useful product. Even in the case of plants, the best that man can do is to insert a miniscule part into a very large entity.

Busch, N., "Jack and the Beanstalk: Property Rights in Genetically Modified Plants" 3 *Minn. Intell. Prop. Rev.* 1 (2002), at p. 136 [Appellant's Authorities, Vol. 1, Tab 12]

17. The distinction between a gene or cell, on the one hand, and seed or plant, on the other, is particularly critical where the seed or plant is self reproducing, as are the canola seeds and plants grown by the Appellant. Because seeds can reproduce themselves, according monopoly rights to a seed or plant would extend those rights to all of the progeny containing the patented invention for all generations until the expiry of the patent term.

Harvard College, *supra*, at para. 170

³ The genome of an agricultural plant, such as canola, represents the full set of the genetic information for that organism.

(ii) The Patent Claims Are on Their Face Restricted to Cells and Genes

18. The distinction between cells or genes and seeds or plants is clear from the way in which Monsanto: 1) described its invention as a chimeric gene; 2) described its method for introducing the gene into plant cells; and 3) and described the particular plant cell (or canola plant cell) so modified. The description makes no reference to a plant genome, seed or plant modified by those genes or cells. In other words, the nature of Monsanto's invention is a chimeric gene or cell, and the method of constructing or making those genetically modified organisms refers to biotechnological processes entirely distinct from the natural processes involved in planting and harvesting seed grain.

Patent 1,313,830, *Appellant's Record*, Vol. VII, Tab 1, p. 1234-1318

19. Furthermore, as Monsanto has conceded in paragraph 78 of its factum, on its face the patent does not extend to seeds or plants. It is therefore not open or purposeful to construct the patent claim so as to extend the scope of Monsanto's monopoly to include the exclusive right to use or sell the plant itself.

(iii) There is No Legal Right to Patent a Seed or Plant

20. Because seeds and plants are higher life forms, they may not be patented under the *Patent Act*. The long standing practice of the Patent Office to deny patents to higher life forms was confirmed by this Court in *Harvard College*. Accordingly, a patent to a gene or cell may not establish, either directly or indirectly, exclusive rights to seeds and plants, or other higher life forms, modified by such organisms. The importance of distinguishing between higher and lower life forms would not have been apparent to the Courts below at the time they were considering their decisions in this case, as this Court's decision in *Harvard College* had not yet been rendered.

21. In the alternative, if the Court finds that the planting and cultivation of seed containing patented genes and cells "necessarily involved the use and making of the patented genes and cells", as Monsanto argues in paragraph 4 of its factum, the

Interveners adopt the Appellant's submissions that a patent so construed is invalid as representing one to a higher life form.

B. The Courts Below Failed to Consider the Public Interest

22. Because seeds and plants comprised of the genes and cells at issue self-replicate and spread in the environment, interpreting the patent claims in a manner that is fair and reasonable to the public presents unprecedented challenges. An overly broad interpretation of the patent claims may not only interfere with further innovation, a traditional concern of patent law, but also derogate from the existing rights of third parties and adversely effect the environment and biodiversity. This significantly complicates the task of finding the proper balance between public and private interests when patents concern living organisms which spread and interact with the environment. The Court below failed to adopt a purposive approach and construed Monsanto's patent in a manner that was not reasonable and fair to the public. An approach sensitive to the public interest would consider the following factors in construing the scope of the invention.

(i) Disproportionate Rights Must Not Be Accorded to the Patent Holder

23. It was neither reasonable nor fair for the Courts below to interpret Monsanto's patent claims to engender rights equivalent to those that would attach to a patent to a seed or plant, because by doing so they accorded Monsanto monopoly rights not only greater than those associated with patents to other inventions, but also out of proportion with the extent to which its inventive modification contributed to the value of those seeds or plants. The Canadian Biotechnology Advisory Committee ("CBAC") has noted the reasons for this:

Because higher life forms can reproduce by themselves, the grant of a patent over a plant, seed or non-human animal covers not only the particular plant, seed or animal sold, but also all its progeny containing the patented invention for all generations until the expiry of the patent term (20 years from the priority date). In addition, much of the value of the higher life form, particularly with respect to animals, derives from the natural characteristics of the original organism and has nothing to do with the invention. In light of

5 these unique characteristics of biological inventions, granting the patent holder exclusive rights that extend not only to the particular organism embodying the invention but also to all subsequent progeny of that organism represents a significant increase in the scope of rights offered to patent holders. It also represents a greater transfer of economic interests from the agricultural community to the biotechnology industry than exists in other fields of science.

10 Canadian Biotechnology Advisory Committee, "Patenting of Higher Life Forms and Related Issues" (Ottawa: Canadian Biotechnology Advisory Committee, June 2002) [Appellant's Authorities, Vol. 1, Tab 3]

15 (ii) Unnecessary Interference with Useful Activity

24. The approach taken by the Courts below exposes countless farmers and third parties to potential liability according to a standard that depends at least in part upon their knowledge concerning the presence of genetically modified plants which have now spread widely across the farm landscape. Many Canadian farmers would "know or ought to know" that their lands and crops are contaminated by genetically modified organisms from plants that they or their neighbours have grown.

McNaughton, *GMO Contamination*, (2003) 66 Sask. L. Rev. 183-216, at paras. 35-38

25. The risk created of being faced with the high costs of having to defend a patent infringement suit provides a significant incentive for farmers to abandon the traditional practice of saving and replanting seed that may be contaminated by genes and cells of Monsanto's invention. But seed saving is not only important to farm economy, it is essential to maintaining biodiversity.

30 (iii) Market Impacts

26. The contamination of crops by genetically modified organisms released into the environment by Monsanto or its agents can also interfere with access by farmers who do not grow genetically modified crops to markets which are closed to genetically modified foods and commodities, or which require them to be segregated and labeled. This has

been the case for several markets in Europe, and the European Union has recently established mandatory labeling and traceability requirements for genetically modified foods.

McNaughton, *supra*, at para. 16

(iv) The Precautionary and Polluter Pays Principles

27. Another dimension of the public interest at issue in this case concerns the environmental impact associated with the release of genetically modified and self-replicating organisms into the environment. As the Royal Society of Canada has noted:

Unfortunately, herbicide-resistant volunteer canola plants are beginning to develop into a major weed problem in some parts of the Prairie Provinces of Canada. Indeed, some weed scientists predict that volunteer canola could become one of Canada's most serious weed problems because of the large areas of the Prairie Provinces that are devoted to this crop. Of particular concern is the occurrence of gene exchange via pollen among canola cultivars resistant to different herbicidesSuch "gene stacking" represents a serious development because, to control multiple herbicide-resistant volunteer canola plants, farmers are forced to use older herbicides, some of which are less environmentally benign than new products.

Royal Society of Canada, *Elements of Precaution: Recommendations for the Regulation of Food Biotechnology of Food Biotechnology in Canada*, An Expert Panel Report on the Future of Food Biotechnology (Ottawa: January, 2001) at pp. 122-123

28. In *Harvard College*, this Court considered that environmental consequences were better dealt with outside the patent system. While the lack of effective environmental regulation may not be grounds for denying the grant of a patent to which the inventor is otherwise entitled, the environmental principles of precaution and polluter pay, which have been acknowledged by this Court, may nevertheless be pertinent to construing a patent in a manner that is reasonable and fair to the public where there is an important public interest in preventing or ameliorating the serious environmental and biodiversity consequences associated with the use and release of genetically modified and living organisms.

114957 Canada Ltée (Spraytech, Société d'arrosage) v. Hudson (Town), [2001] 2 S.C.R. 241;
Imperial Oil Ltd. v. Quebec (Minister of the Environment), 2003 SCC 58;
 Royal Society of Canada, *supra*, at pp. 129-131

5 29. However, the decision of the Courts below is likely to have the opposite effect, by shifting the burden of contending with the unwanted consequences of the release of this invention into the environment from the patent holder to the public. Innocent third parties will bear a significant burden of monitoring their crops and taking steps to eradicate or remove unwanted intruders containing Monsanto's patented gene.

10 Volunteer plants arrive on the farmer's fields through a number of routes, including by the wind, animals, and farm equipment; and by latent germination of dormant seeds left from a previous harvest. Identifying the volunteer genetically modified plants in fields of the same species of plants,
 15 or eradicating volunteer plants in a field of a different species of plants may be extremely expensive and difficult. Thus, the requirement that the farmer not harvest volunteer genetically modified plants places an unreasonable burden on the farmer's resources and an unreasonable restraint on his use of his land.

20 Busch, *supra*. at p. 111; CBAC, *supra*, pp. 13-14

25 **(v) Parliament's Guidance on Balancing Interests**

30 30. The Courts below also failed to consider the guidance offered by Parliament when it enacted the *Plant Breeders' Rights Act*, 1990, c. 20 ("PBRA") concerning the appropriate balance to be struck between the rights of inventors of new plant varieties and those of farmers. In this regard, the Act contains a farmers exemption, which allows farmers to save and plant seed; a system of compulsory licensing, which allows farmers access to seeds at a reasonable price; and an advisory committee on which farmers can voice their concerns. As noted by this Court in *Harvard College*, these restrictions on the rights of plant breeders were intended to better protect the public interest.⁴

Harvard College, *supra*, at para. 194

⁴The PBRA was considered by the trial court, but only for purpose of deciding whether that Act precluded a patent on a gene or cell being issued under the *Patent Act*.

31. While there are significant differences between the PBRA and the *Patent Act*, the greater measure of protection afforded by the latter, reinforces the need to ensure that this protection not come at the cost of sustaining traditional farming practices, preserving bio-
 5 diversity or protecting other public interests. This is particularly true in light of the absence of evidence that the investments of plant breeders using traditional breeding techniques are less substantial than those of companies relying upon biotechnology to invent new varieties of plants.

10 Derzko, "Plant Breeders Rights in Canada and Abroad: What are Those Rights and How Much Must Society Pay for Them?", (1994) McGill L.J. 144, at p. 10

32. Further support for this view can be found in the commentary and recommendations of the CBAC, to which this Court made extensive reference in *Harvard College*. As the Court noted, the CBAC stressed the need to establish a farmers' privilege should the
 15 patenting of higher life forms be permitted.

Harvard College, *supra*, at para. 171; CBAC, *supra* at p. 12-13

33. Preserving farmers' right to save seed can also be found under the *International Treaty on Plant Genetic Resources for Food and Agriculture*, which Canada was among
 20 the first countries to sign and ratify, and which gives prominent attention to the need to preserve the rights of farmers to save, use and exchange seeds.

International Treaty on Plant Genetic Resources For Food and Agriculture, UN Food and Agriculture Organization, 3 November 2001

25
(vi) It is Not Unreasonable or Unfair to Deny Monsanto Monopoly Rights to Seeds and Plants in Which Patented Genes and Cells May be Present

34. A purposive construction that limits Monsanto's monopoly rights to those directly
 30 associated with or attributable to the genes and cells it invented would still accord it significant monopoly rights. First, a more limited monopoly would still prevent the invention from being made or used by other biotechnology companies, and would not effect

Monsanto's licensing agreements with such companies. Second, substantial additional protection for the investment made by inventors in new plant varieties would also be available under the PBRA. Monsanto is free to join its own licensees in registering plant varieties comprised of the glyphosate resistant genes and cells. Third, the technology use agreements that Monsanto enters into with farmers licensed to use Roundup Ready Canola would not be affected by declining to extend its monopoly rights to include the use of seeds and plants modified by the genes and cells it has patented. Finally, as Monsanto acknowledges in paragraph 22 of its factum, farmers are entitled to save and reuse seed of other herbicide tolerant varieties of canola that compete with Roundup Ready Canola. Accordingly no presumption is warranted that biotechnological inventions must be given such broad scope as to deny farmers the right to save and reuse seed in order to sustain investment in this sphere.

C. The Appellant's Actions Did Not Amount to Patent Infringement

35. Patent infringement requires interference with the monopoly granted with a patent holder's "exclusive right, privilege and liberty of making, constructing and using the invention and selling it others to be used....". Therefore, to infringe, the Appellant must have made, constructed, used or sold the patented invention.

Patent Act, supra, s. 42

36. The Interveners submit that the failure of the Court below to properly construct Monsanto's patent led it to misapprehend the manner in which the patent might be infringed. Thus, the Court found that the Appellant had infringed the patents in question: *by planting seed* he had saved from the previous years crop, which he "knew or ought to have known" was Roundup tolerant; and *by selling seed* harvested from that crop. Because the Court below did not specify whether planting seed represented infringement by way of making, constructing or using the invention, we deal with each of these possibilities in turn.

(i) **Appellant Did Not “Make” or “Construct” the Gene or Cell**

37. Under Section 27(3)(b) of the *Patent Act*, the specification for an invention must, *inter alia*, “set out clearly the various steps in a process, or the method of constructing, making, compounding, or using” the invention. Most of the fifty page specification Monsanto filed as part of its patent application is dedicated to describing the highly complex and sophisticated techniques and procedures that would enable a skilled scientist with access to a properly equipped biotechnology laboratory to make, construct, compound or use the genetically modified cells and genes in question.

Patent 1,313,830, *Appellant’s Record*, Vol. VII, Tab 1, p. 1234-1318

38. The act of planting a seed is not remotely akin to the methods or procedures delineated by Monsanto’s patent specification for constructing, making or compounding its invention. Monsanto’s patent clearly pertains to reproducing the genes and cells described by its patent claims *through the use of technology, but not through planting or procreation*. Professor Gold describes the relationship between technological and natural processes of reproduction as these arise within the framework of patent law in the following way:

A person who holds a patent in a gene in isolated form can effectively prevent others from selling, transferring, or reproducing that gene through the use of technology. Someone wishing to create a genetically-modified plant or animal out of this gene will need access to the that gene in isolated form in order to insert copies of the that gene into the desired plant or animal cells. Therefore, by controlling the use and sale of the underlying gene, the patent owner can effectively prevent others from creating a genetically-modified plant or animal. Once a genetically-modified plant or animal is created and is purchased by someone, the patent over the underlying gene could not be used to prevent further reproduction of that animal or plant.

Gold, *supra*, at p. 23

39. Furthermore, planting a seed simply sets in motion natural processes to which no monopoly interest can be claimed, because they lie outside the bounds of the *Patent Act*. Commenting on an application to patent a hybrid plant, this Court summarized the law as it applied to the selective breeding and cultivation of plants in the following manner:

5 The intervention made by Hi-Bred does not in any way appear to alter the soybean reproductive process, which occurs in accordance with the laws of nature. Earlier decisions have never allowed such a method to be the basis of a patent. The courts have regarded creations following the laws of nature as being mere discoveries the existence of which man has simply uncovered without thereby being able to claim that he invented them. [1634]

10 Pioneer Hi-Bred Limited v. Canada (Commissioner of Patents), [1989] 1 S.C.R. 1623, at p. 1634 [Appellant's Authorities, Vol. 1, Tab 4]; Re Application 079973 (1979), 54 CPR (2d) 124 (Patent Appeal Board and Commissioner of Patents) [Respondent's Authorities, Tab 2]

40. To the extent that genetic modification plays no role in altering the reproductive processes of the plant, the reasoning in these cases applies equally to genetically modified plants. Planting a seed is not, nor is it akin to, making or constructing a chimeric gene or cell comprised thereof, that may be present in that seed but which is entirely superfluous to the natural processes of germination and growth of that seed.

15 Busch, supra, at pp. 139-143

20 **(ii) Appellant Did Not "Use" the Gene or Cell**

41. As defined by s. 2 of the *Patent Act*, the *usefulness* of an invention is one of its two essential features, the other being its novelty. As noted, to be patented, the *use* of the invention, as contemplated by the inventor, must be set out in the patent specification. Once issued, a patent accords the inventor a monopoly with respect to *use* of the invention, and the sale of others to be used. Therefore, a purposive construction of a patent must have regard to the purpose for which the invention may be used.

42. The Courts below failed to apply a purposive approach to constructing Monsanto's patent by holding that it was unnecessary to have regard to the entire patent specification to ascertain the proper scope of its monopoly because there was "no ambiguity in the claims that would justify recourse to the disclosure" (see Court of Appeal, para. 46). However, in *Dableh v. Ontario Hydro*, the case cited as authority for this proposition, the patent claim clearly delineated both the nature of the invention and the method for its use. The court in *Dableh* did not suggest that determining whether alleged "use" infringement

of a patent did not require a determination of the usefulness of the patent. By contrast, in the present case the patent claims offer only the most rudimentary description of certain genetically modified genes and cells. It is impossible to discern from the claims how the invention might be new or useful, or to know the method of making, constructing, or using it. For this information, one must have regard to entire specification. Otherwise, because an invention must be new and useful to be patented, a literal reading of Monsanto's patent claims would support a conclusion that the patent is invalid because no use or utility is described.

Dableh v. Ontario Hydro, [1996] 3 F.C. 751 (C.A.), at p. 775, leave to appeal denied [1997] 1 S.C.R. x [Appellant's Authorities, Vol. 2, Tab 23]

43. Instead of considering the patent claims in the entire context of the specification, the Courts below limited their inquiry to the four corners of those patent claims which are alleged to have been infringed. The Interveners submit that, because the patent claims at issue describe no use, usefulness, utility, or method of operation, ignoring the context in which they are set out amounts to a purposeless (not purposeful) approach to constructing the patent claims, an approach consistently rejected by this Court. The importance of having regard to the entire patent specification as a means for determining both the nature of the invention and the method of its performance has been oft repeated by this Court. Therefore the Courts below fell into error disregarding the patent specification as a necessary guide to that construction.

Whirlpool Corp. supra, at p. 1094

44. The specification enables someone skilled in the art or science to use the invention to create a chimeric gene, and to use that gene to modify a plant cell through the use of biotechnology. As noted the only "operation or use" contemplated by Monsanto's patent or described in its patent specification concerns employing certain techniques to create a chimeric plant gene and glyphosate resistant plant cells. In practical terms, the patent accords Monsanto protection from the unauthorized use of its invention by other biotechnology companies. Indeed Monsanto has relied on its patent to license other companies to use its invention in this manner (see para. 82 of the Trial Division decision).

45. In *Consolboard*, this Court held that an inventor was not obligated in his disclosure or patent claims to specify the utility of the invention, it being sufficient to describe the invention so persons skilled in the particular art could without further instruction produce it. However, Dickson J. also relied upon the following passage from *R. v. American Optical Company*:

.... If an inventor has adequately defined his invention he is entitled to its benefit even if he does not fully appreciate or realize the advantages that flow from it or cannot give the scientific reasons for them. It is sufficient if the specification correctly and fully describes the invention and its operation or use as contemplated by the inventor, so that the public, meaning thereby persons skilled in the art, may be able, with only the specification, *to use the invention as successfully as the inventor could himself.* [emphasis added]

Consolboard, supra, quoting *R. v. American Optical Company* (1950), 11 Fox Pat. C. 62 at p. 85

46. Thus defined, “use” in the present context would mean the deployment of the scientific methods and technologies disclosed by the patent specification for the purpose of creating a chimeric gene or using it to modify a plant cell. These esoteric skills and devices are obviously not those of Appellant, or any farmer, who would not therefore be capable of infringing the patent by using it in this manner.

(iii) Appellant Did Not Make Use Of a Glyphosate Resistant Canola Plant

47. In the alternative, if Monsanto’s patent is construed to convey monopoly rights to the patented genes and cells outside the laboratory (that is, when these exist in genetically modified seeds and plants) then to infringe the Appellant must have acted in some manner that put into service, or otherwise took advantage of, some quality that such seeds or plants possess by reason of having been so modified. The act of planting a seed cannot in itself be regarded as using Monsanto’s invention, because it does not put into service, employ for a purpose, take advantage of, or otherwise engage any utility associated with the genetically modified genes or cells in question. Planting a seed is bringing the seed into service for its applied purpose, ie. to grow a plant. Planting a seed is not bringing into

service a chimeric gene or cell comprised thereof that plays no role in germination, growth or maturation of that seed or plant. The patent does not establish monopoly rights to the use of seeds or plants that are grown in the natural environment.

5 Utility is an essential part of an invention ... Unless the inventor is in a position to establish utility as of the time the patent is applied for ... the Commissioner “by law” is required to refuse the patent.

...

10 If it is not useful, it is not an invention within the meaning of the Act.

Apotex Inc. v. Wellcome Foundation Ltd. [2002] 4 S.C.R. 1, at para. 46, 51

Busch, supra, at pp. 144-147

15 48. When one has regard to the entire patent specification it is readily apparent that there is only one conceivable use of the invention outside the biotechnology laboratory, and that is to take advantage of resistance by plants modified by the invention to glyphosate herbicides, by spraying them with such herbicides. As noted, the Court below made no finding that the Appellant sprayed his crops with a glyphosate herbicide. In fact
20 it found his evidence to the contrary to be uncontradicted. Therefore, the Appellant cannot have infringed the patent by using the invention in this manner.

Harvard College, supra, at para. 97

25 49. As noted, the Courts below found the Appellant liable for simply planting and selling seeds which he knew or ought to have known contained genes or cells patented by Monsanto. But the question of infringement depends not upon what the defendant *knows*, but upon what he *does*. The Appellant did not make use of the glyphosate resistant characteristics, which are the “pith and marrow” of Monsanto’s invention. Knowledge or
30 assumed knowledge that the seeds were glyphosate resistant cannot be equated with deriving benefit from the patent. In this respect, the Courts below erred in equating knowledge or presumed knowledge with use. Moreover, the act of simply possessing an invention is not of itself sufficient to establish use of a patent to that invention; rather, only where possession together with all the surrounding facts and circumstances supports a

conclusion that the defendant has benefited from the special utility or usefulness of the patent (in this case, glyphosate resistance) will use be established.

Pfizer Corporation v. Ministry of Health, [1965] A.C. 512 (H.L.)

5 50. In this regard, there was no finding that the Appellant purchased or did any other act
to acquire the seeds containing Monsanto's genes/cells and which were present on his
property in 1997. Nor did the Courts below find that his possession of them in any other
way implied or indicated an intention to use them to grow canola that would be sprayed
with a glyphosate herbicide, or otherwise derive some benefit from them. Indeed the
10 Court's description of the Appellant's farming practices, and of the fact that he mixed seed
from various sources to plant his 1998 crop, entirely belie any such intention. As noted the
Court below found that his uncontradicted evidence was that he did not spray his crops
with a glyphosate herbicide. Thus, while the Court found that the Appellant knew or ought
to have known of the existence on his property of the glyphosate resistant seed, the Court
15 erred in equating this with use of (i.e. deriving benefit from) the patented quality of those
seeds (i.e. their glyphosate resistance).

51. To the extent that Monsanto now seeks to review the uncontradicted evidence that
the Appellant did not make use of the glyphosate resistant qualities of the seed by spraying
20 his 1998 crops, these findings depend upon the testimony and credibility of the witnesses
who testified at trial and are not reviewable on appeal. Thus, Monsanto's efforts to invite
a review of these factual matters by this Court should be rejected.

(iv) The Appellant Did Not Sell the Gene or Cell to Others For Their Use

25 52. A patent may be infringed by selling an invention to others "to be used" (s. 42 of the
Patent Act). While Mr. Schmeiser sold his 1998 crop, there is absolutely no suggestion that
he sold any or all of it for the purpose of allowing others to use Monsanto's patent.
Therefore, the Court erred in finding that he infringed the patent by simply selling the seed
harvested in his 1998 crop to a commercial crushing plant where it was used for the
30 purpose of producing canola oil. As a result, the Interveners submit that there is no basis

upon which to find that the Appellant infringed the patent by interfering with its exclusive rights to make, construct, use, or sell to others for use its invention.

D. Remedies

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53. In the alternative, the Interveners rely upon the Appellant's submissions that no damages should be awarded where, given the character of the patent and the circumstances of the case, no benefit is derived by the infringer from the patent. Even if the Appellant infringed Monsanto's patent, as a non-benefiting infringer, any damages should be restricted to the Appellant's benefit or advantage derived from the use of the invention itself (i.e., the glyphosate resistant qualities of the patent).

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Siebrasse, supra

PART IV - THE ORDERS SOUGHT

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54. The Interveners request that the Court allow the appeal and grant the remedies sought by the Appellant.

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ALL OF WHICH IS RESPECTFULLY SUBMITTED

Steven Shrybman
Steven Barrett
Ethan Poskanzer

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SACK GOLDBLATT MITCHELL
Counsel for the Interveners

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IN THE SUPREME COURT OF CANADA
(On Appeal from the Federal Court of Appeal)

B E T W E E N:

**PERCY SCHMEISER and
SCHMEISER ENTERPRISES LTD.**

Appellants
(Appellants)

- and -

**MONSANTO CANADA INC. and
MONSANTO COMPANY**

Respondents
(Respondents)

- and -

**COUNCIL OF CANADIANS, ACTION GROUP ON EROSION,
TECHNOLOGY AND CONCENTRATION, SIERRA CLUB OF CANADA,
NATIONAL FARMERS UNION, RESEARCH FOUNDATION FOR
SCIENCE, TECHNOLOGY AND ECOLOGY and INTERNATIONAL
CENTER FOR TECHNOLOGY ASSESSMENT; THE CANADIAN
CANOLA GROWERS ASSOCIATION; AG-WEST BIOTECH INC.; THE
ATTORNEY GENERAL FOR ONTARIO; THE CANADIAN SEED TRADE
ASSOCIATION; and BIOTECCanada**

Interveners

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