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I. INTRODUCTION

¶1 “If a man puts [corn] into my bag, in which before there is some corn, the whole is mine, because it is impossible to distinguish what was mine from what is his.”¹ The Supreme Court of Canada recently rejected this principle in its decision in *Monsanto v. Schmeiser*.² Canada now imposes strict liability for infringement involving unlicensed use of genetically modified (“GM”) seed, even in situations in which natural forces transfer the intellectual property into an innocent person’s crops.³ This article discusses the *Schmeiser* case and presents a comparative analysis of Canadian and American patent infringement provisions. It further discusses possible alternatives to holding farmers who unintentionally possess a patented gene strictly liable for infringement.

II. BACKGROUND OF THE PERCY SCHMEISER CASE

¶2 Monsanto owns a patent on Roundup Ready® canola seed.⁴ Roundup Ready® seed is a genetically modified organism (“GMO”), which is resistant to Roundup® herbicide (glyphosate). Farmers who purchase these seeds from Monsanto can spray a whole field without worrying about harming the crops, keeping weed control costs low.⁵ Unfortunately, the only way to distinguish between a canola plant grown from Roundup Ready® seed and a mundane plant is through a chemical test or microscopic inspection.⁶ Therefore, it is difficult for patented seed owners to monitor use and unauthorized users may have no idea they are in possession of a patented seed.

¶3 Percy Schmeiser is a resident of Saskatchewan, Canada who has been farming for over 55 years.⁷ Schmeiser discovered Roundup Ready® plants in his fields after some of

* I would like to give a special thanks to my future husband Justin A. Kwong for without his inspiration, encouragement and agricultural knowledge this note would not have been possible.

¹ Colwill v. Reeves, 2 Camp. 575, 576 (1811). See also 15A C.J.S. *Confusion of Goods* § 6 (2005); 1 Am. Jur. 2d *Accession and Confusion* § 1 (2004).

² Monsanto Can. Inc. v. Schmeiser, [2004] S.C.R. 910.

³ See *Id.* at 910-11; Keith Aoki, *Recent Skirmishes in the Seed Wars*, 11 CARDOZO J. INTL. & COMP. L. 247, 292-93 (2003).

⁴ U.S. Patent No. 5,352,605 (issued Oct. 28, 1993); Can. Patent No. 1,313,830 (issued Aug. 6, 1986).

⁵ Schmeiser, [2004] S.C.R. at 915-16.

⁶ *Id.* at 914.

⁷ *Profile of Percy and Louise Schmeiser*, <http://www.percyschmeiser.com/profile.htm> (last visited Nov.

his canola survived numerous sprayings of Roundup®.⁸ Despite the fact that he had never purchased the seed, Schmeiser took no action to contact Monsanto or remove plants he knew to be patented.⁹ Following an anonymous tip, Monsanto's investigators confirmed the presence of plants bearing the gene in Schmeiser's fields.¹⁰ Monsanto then brought suit for infringement of its patented gene and sought an injunction, delivery of all infringing seeds or crops in Schmeiser's possession, plaintiff's costs, actual damages and punitive damages.¹¹

¶4 At trial, Schmeiser claimed the genetically modified seeds appeared on his fields without his intent and were unwelcome.¹² Five farmers in Schmeiser's area¹³ and approximately 40% of Canadian farmers use Roundup Ready® canola seed.¹⁴ During cross-examination, Monsanto's lead investigator admitted there was no indication that Schmeiser illegally obtained the patented gene.¹⁵ Tests conducted by Monsanto estimated that 95-98% of Schmeiser's 1000+ acres were contaminated.¹⁶ The trial court concluded it was unlikely that such an extensive proportion of contamination was due to windblown seeds alone.¹⁷ The trial court also dismissed the contention that Monsanto had waived its rights to the patent by not controlling the spread of the gene, citing the company's monitoring activities and policy of removing contaminated plants upon request.¹⁸

¶5 In addition to arguing lack of intent, Schmeiser asserted several alternative defenses to Monsanto's infringement claim. First, Schmeiser claimed that the Roundup Ready® gene was comparable to a stray bull.¹⁹ "Stray bull" cases are part of a larger law of admixture wherein, for example, a bull belonging to a cattle rancher wanders off his property and produces a calf with a cow belonging to a different rancher. Under the doctrine, the mutual ownership claims are settled in favor of the second rancher.²⁰ The trial court distinguished *Schmeiser* from the stray bull case law based on the fact that Monsanto does not have rights to the plant, only the gene's use.²¹ Second, instead of basing his defense on "innocent infringement," Schmeiser claimed he did not use the patented gene because herbicide was not sprayed on his fields.²² After analyzing the patent claims, this argument was rejected because the claims make no requirement for

17, 2005).

⁸ *Monsanto Can. Inc. v. Schmeiser*, C.P.R. (4th) 204, [2001] F.C.J. No. 436(QL), ¶ 38-39.

⁹ *Id.* ¶ 40.

¹⁰ *Schmeiser*, [2004] 1 S.C.R. at 912; *Schmeiser*, [2001] F.C.J. 436, ¶ 37-58.

¹¹ *Id.* ¶ 9.

¹² *Id.* ¶ 11.

¹³ *Schmeiser*, [2004] S.C.R. at 911.

¹⁴ Aoki, *supra* note 3, at 294.

¹⁵ Br. of Res. ¶ 38, *Monsanto Can. Inc. v. Schmeiser*, [2001] F.C.J. 436.

¹⁶ *Schmeiser*, [2001] F.C.J. 436 ¶ 53.

¹⁷ *Schmeiser*, [2001] F.C.J. 436 ¶ 118. There is some controversy as to the statistical accuracy and reliability of Monsanto's methods for determining the amount of its patented seed on Schmeiser's fields. See *Schmeiser*, [2001] F.C.J. 436 ¶ 62, 73, 177; Br. of Res. ¶ 26, 55-118, *Schmeiser*, [2001] F.C.J. 436.

¹⁸ *Id.* ¶ 96-98.

¹⁹ *Id.* ¶ 93.

²⁰ *Id.*

²¹ *Id.*

²² *Id.* ¶ 121; Br. of Res. ¶ 160, *Schmeiser*, [2001] F.C.J. 436.

use.²³ Finally, Schmeiser argued that the patent was invalid because something that is neither caused by human intervention nor controllable by humans is not the proper subject matter of a patent.²⁴ The court disagreed, holding that the patent was valid.²⁵

¶6 The trial court ultimately determined that Monsanto was entitled to relief in the form of the requested injunction, delivery of its patented seeds or plants in Schmeiser's possession, profits of \$105,000, damages of \$15,450 and exemplary damages of \$25,000 (all amounts are in Canadian dollars).²⁶ The Federal Court of Appeals affirmed.²⁷

III. THE SUPREME COURT OF CANADA'S DECISION

¶7 In a 5-4 decision, the Supreme Court of Canada affirmed the lower court's holding in a finding of infringement.²⁸ In its determination of infringement, the Canadian Supreme Court looked to whether the "defendant's activity deprived the inventor in whole or in part, directly or indirectly, of full enjoyment of the monopoly conferred by law."²⁹ A Canadian patentee has "the exclusive right, privilege and liberty of making, constructing and using the invention and selling it to others to be used. . . ."³⁰ This means that, in the case of GM seeds, the owner has the exclusive right to the gene in question, regardless of how the gene appeared or the intent of the farmer on whose fields the gene was found.

¶8 The first step in determining use is to compare the object of the patent with the defendant's activity, and assess whether the defendant's action involved that object.³¹ Use applies to patented products, processes, and their output.³² A defendant's activity may involve the object of the invention even if it is not used for its intended purpose.³³ "While intention is generally irrelevant to determining whether there has been use and hence, infringement, the absence of intention to employ or gain any advantage from the invention may be relevant to rebutting the presumption of use raised by possession."³⁴

¶9 The Supreme Court found that Schmeiser did not make the patented plant within the meaning of the Canadian Patent Act.³⁵ The Court held that Schmeiser's saving and planting of the seed containing the patented gene, and subsequent harvest and sale of infringing canola, was equivalent to utilization and was commercial in nature.³⁶ Analogizing cells to Lego® blocks, the Court explained that "if an infringing use were alleged in building a structure with patented Lego® blocks, it would be no bar to a

²³ Schmeiser, [2001] F.C.J. 436 ¶ 122.

²⁴ *Id.* ¶ 78.

²⁵ *Id.* ¶ 90. The specifics and merits of this position are beyond the scope of this article.

²⁶ *Id.* ¶128.

²⁷ *Monsanto v. Schmeiser*, [2003] F.C. 165, 205.

²⁸ Schmeiser, [2004] S.C.R. at 937.

²⁹ *Id.* at 919.

³⁰ Patent Act, R.S.C., ch. P-4, § 44 (1985) (Can.).

³¹ Schmeiser, [2004] S.C.R. at 922.

³² *Id.* at 921.

³³ *Id.* at 923.

³⁴ *Id.* at 927.

³⁵ *Id.* at 917.

³⁶ Schmeiser, [2004] S.C.R. at 930.

finding of infringement that only the blocks were patented and not the entire structure.”³⁷ Although that is a broad interpretation, the Supreme Court justified the conclusion because it follows the principle that the patent owner is entitled to the *entire* monopoly and all of its business advantages.³⁸ Justice Arbour’s dissent found this analogy particularly weak because the structuring of Legos® requires human intervention, which is not an element of the infringer’s actions in this case.³⁹ Unmoved by this argument, the majority determined that the action of sowing and cultivating plants in order to make a profit was enough of a “deliberate and careful” action to support a finding of use under the principles and interpretations of the Canadian Patent Act.⁴⁰

¶10 Mere possession of a patented article may amount to infringement where unfulfilled intention to use is to the detriment of the patentee.⁴¹ In some cases, possession of a patented chattel has an insurance value also known as a “stand-by utility.”⁴² For example, a fire extinguisher that is never used is nevertheless valuable because it is available at a moment’s notice should a fire occur.⁴³ In Schmeiser’s case, he did not utilize the invention by spraying with Roundup® but the fact that he could have sprayed is a stand-by utility.⁴⁴ If there is reason to spray in the future, no harm would have come to his crops as a result of the patented gene that was now present in his crops.⁴⁵ Schmeiser argued he did not have stand-by utility because he did not possess enough Roundup® to effectively treat his fields should the need arise.⁴⁶ However, none of the courts considered whether Schmeiser actually possessed enough Roundup® to effectively spray his fields.

¶11 Traditionally, intent to infringe is presumed in commercial circumstances unless the defense shows the contrary.⁴⁷ Schmeiser claimed he never intended to cultivate the patented plants.⁴⁸ The fact that the gene actually hurt Schmeiser’s farming efforts is convincing evidence of lack of intent.⁴⁹ Schmeiser practiced a common method of saving his seed every year (commonly referred to as “brown bagging”), which allowed him to develop a crop from seeds with desirable genetic characteristics.⁵⁰ The contamination of the patented seeds ruined several years of work Schmeiser dedicated to developing his own strain of canola.⁵¹ The presumption that Schmeiser intended to cultivate the patented plants could have been rebutted with a showing that he quickly attempted to remove both the plants containing Monsanto’s patented gene after receiving notice from

³⁷ *Id.* at 921.

³⁸ *Id.* at 991-92.

³⁹ *Id.* at 954 (Arbour, J., dissenting in part).

⁴⁰ *Id.* at 935.

⁴¹ HAROLD G. FOX, CANADIAN PATENT LAW AND PRACTICE, 383-84 (4th ed. 1969).

⁴² Schmeiser, [2004] S.C.R. at 923.

⁴³ *Id.* The court looks for the intent to use the patented article as a stand-by utility. *Id.* at 924-925.

⁴⁴ *Id.* at 933.

⁴⁵ *Id.*

⁴⁶ Br. of Res. ¶ 48-49, Schmeiser, [2001] F.C.J. 436.

⁴⁷ Schmeiser, [2004] S.C.R. at 926-27.

⁴⁸ *Id.* at 933-34.

⁴⁹ Schmeiser, [2001] F.C.J. 436 ¶ 11; Percy Schmeiser, *Facing Down Goliath, One Farmer’s Battle with a GM Giant*, 32 Acres USA 28 (Jan, 2002).

⁵⁰ Br. of Res. ¶ 7, Schmeiser, [2001] F.C.J. 436.

⁵¹ Schmeiser, [2001] F.C.J. 436 ¶ 29-30; Br. of Res. ¶ 7, Schmeiser, [2001] F.C.J. 436.

Monsanto regarding the infringement, and that the infringing plant concentration on his fields was more likely caused by seeds having blown onto his property.⁵² These defenses were unavailable to Schmeiser because he continued the practice of saving seeds and planting them after Monsanto notified him of his infringement.⁵³

¶12 Schmeiser argued that if no advantage had been taken and there was no intent to use, there was no infringement.⁵⁴ Schmeiser did not commercially spray with Roundup® nor did he market his canola as containing the patented gene.⁵⁵ The Supreme Court rejected this argument, and held that increased profits are irrelevant⁵⁶ and the potential for future revenue opportunities, such as brown bagging, deprives the patent owner of its entitlement.⁵⁷ Even if it was unlikely that Schmeiser would ever benefit from the patent, the opportunity is all that is relevant.

¶13 The Supreme Court found that Schmeiser's actions constituted infringement. Monsanto's evidence at trial, estimating that 95-98% of Schmeiser's 1000+ acres contained canola plants with its patented gene,⁵⁸ convinced the Supreme Court that the infringing gene's presence was too pervasive to be caused entirely by accidental delivery.⁵⁹ The Supreme Court found that Monsanto's rights to the gene were recognized by the law and Schmeiser could not defend against Monsanto's infringement action by claiming a lack of intent.⁶⁰ Monsanto argued that they took reasonable efforts to avoid the spread of seeds to other neighbors and the Court stated that it was not incumbent upon Monsanto to do more than was reasonably necessary to prevent the inadvertent spread of its seeds by the individuals who legally purchased them.⁶¹ Schmeiser was put on notice of his infringement, yet he continued to plant GM contaminated seed.⁶² Despite a finding of infringement, the Supreme Court found Schmeiser did not benefit from the Roundup Ready® gene because he did not use Roundup® on his crops, thus made no more profit than he would have if he did not use the patented seeds.⁶³ The Supreme Court, therefore, ruled that Monsanto was not entitled to damages.⁶⁴

IV. THE REALITY OF WINDBLOWN SEEDS

¶14 With 600,000 acres of Roundup Ready® canola planted in the U.S. and over 4,000,000 acres planted in Canada,⁶⁵ GMO farming is becoming a common practice.

⁵² Schmeiser, [2004] S.C.R. at 933.

⁵³ *Id.* at 933-34.

⁵⁴ *Id.* at 932.

⁵⁵ *Id.* at 938-39.

⁵⁶ *Id.* at 926.

⁵⁷ *Id.* at 933.

⁵⁸ *Id.* at 912.

⁵⁹ *Id.* at 929. There is some controversy as to the statistical accuracy and reliability of Monsanto's methods for determining the amount of its patented seed on Schmeiser's fields. See Schmeiser, [2001] F.C.J. 436 ¶ 62, 73, 177; Br. of Res. ¶ 26, 55-118.

⁶⁰ Schmeiser, [2004] S.C.R. at 911, 930.

⁶¹ See Schmeiser, [2003] F.C. at 196 (the Supreme Court of Canada did not revisit this issue).

⁶² Schmeiser, [2004] S.C.R. at 936.

⁶³ *Id.* at 938-39.

⁶⁴ *Id.* at 939.

⁶⁵ Monsanto Co., *Achievements in Plant Biotechnology - Evaluation: Canola*,

Seeds may be spread by many vectors, including wind, wild animals, combines, transport vehicles, and commingling during storage.⁶⁶ Wind is a major contributor to the unwanted spread of GM seeds.⁶⁷ Bentgrass seed, another GM seed produced by Monsanto, can travel up to thirteen miles by wind alone.⁶⁸ Canola seeds are not nearly as mobile, but because they are small, round, and smooth they also travel easily in the wind.⁶⁹ Some estimates show that 800 meters of buffer are required to isolate canola from cross-contamination.⁷⁰ Other studies, however, indicate that the problem is less severe and that there is minimal—less than one percent—gene flow through seeds between adjacent fields.⁷¹

¶15 Pollen containment is another concern.⁷² Plants produce pollen in order to bear the fruits for which we harvest them. GM plants produce pollen that contains a copy of the dominant patented gene; therefore, any plant fertilized with GM plant pollen will produce GM seeds.⁷³ This creates a serious problem for both restricting illegal use of the technology and for preventing genetic contamination of nearby fields.⁷⁴ The desirable traits are significantly reduced in a plant created by cross-pollination.⁷⁵ Nevertheless, “once [GM seeds] are released into the environment, the consequences of their uncontrolled reproduction in the face of decreased biodiversity cannot be predicted.”⁷⁶

¶16 Dormancy is also a problem. Canola seeds may remain dormant for six to ten years before germination.⁷⁷ This means that, even if GM plants are removed from a field, there is a period of up to ten years where there is a strong likelihood that a portion of the contaminated seeds that remain in the ground will germinate.⁷⁸ This makes it extraordinarily difficult for a farmer to stop infringement once he or she has received notice that the gene is on his or her property.

V. THE DEFINITION OF USE IN THE UNITED STATES

¶17 Similar to Canadian practice, American patent owners are granted “the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States or importing the invention into the United States.”⁷⁹ Use must

http://www.biotechknowledge.com/biotech/bbasics.nsf/biotech01_canola.html (last visited Nov. 17, 2005).

⁶⁶ Drew L. Kershen, *Of Straying Crops and Patent Rights*, 43 WASHBURN L.J. 575, 578 (2004).

⁶⁷ Karl A. Thiel, *Seeds in the Wind: For Monsanto, Patent Protection Stirs Controversy*, <http://www.biospace.com/articles/120699.cfm> (on file with Nw. J. Tech. & Intell. Prop.).

⁶⁸ Andrew Pollack, *Can Biotech Crops Be Good Neighbors?*, N.Y. TIMES, Sept. 26, 2004, § 4, at 12.

⁶⁹ E. Ann Clark, *The Implications of the Schmeiser Decision*, <http://www.percyschmeiser.com/crime.htm> (last visited Nov. 17, 2005).

⁷⁰ *Id.*

⁷¹ Kershen, *supra* note 66, at 579.

⁷² Br. Of Res. ¶ 18, Schmeiser, [2001] F.C.J. 436.

⁷³ *Id.*

⁷⁴ *Id.*

⁷⁵ Norman Siebrasse, *The Innocent Bystander Problem in the Patenting of Higher Life Forms*, 49 MCGILL L.J. 349, 367-68 (2004).

⁷⁶ Carlos Scott Lopez, *Intellectual Property Reform for Genetically Modified Crops: A Legal Imperative*, 20 J. CONTEMP. HEALTH L. & POL’Y 367, 377 (2004).

⁷⁷ Aoki, *supra* note 3, at 294.

⁷⁸ *Monsanto Can. Inc. v. Schmeiser*, [2004] S.C.R. at 933-34.

⁷⁹ 35 U.S.C. § 154(a)(1) (2000).

incorporate, in some way, the principles of the claimed invention.⁸⁰ Under this definition, it is important to determine what exactly the invention is. For example, was the invention at issue in *Schmeiser* the patented gene or the seed's ability to survive a Roundup® spraying? It is logical to think that in order to benefit from the invention, selling the seed as Roundup Ready® or spraying with Roundup® would be required. *Schmeiser* did neither.⁸¹ The Canadian Courts determined Monsanto's claimed invention was the gene itself and Monsanto's U.S. patent expressly claims a "gene" in its patent.⁸² Therefore, not spraying with Roundup® will not eliminate the use factor in the United States unless the U.S. patent does not claim the gene.

¶18 In the United States, mere possession is not infringement without "threatened or contemplated" use or sale.⁸³ Planting and harvesting seed constitutes use in Canada and the U.S. courts seem to be following this interpretation.⁸⁴

VI. KNOWLEDGE AND INTENT IN THE UNITED STATES

¶19 In *Schmeiser*, the Canadian Supreme Court did not consider intent or innocent discovery of windblown or "blow-by" patented plants.⁸⁵ The Court decided to focus on what the alleged infringer did, rather than what he intended to do.⁸⁶ The United States takes a similar approach, defining an infringer as one who makes, uses or sells a matter covered by a patent without the authorization of the owner infringes, regardless of knowledge or intent.⁸⁷ Intent to utilize a patented invention is not an element of any form of infringement.⁸⁸

¶20 American courts, however, have not completely ignored all evidence of intent. The Fifth Circuit recognizes that there may be times when literal infringement should be overlooked, if the infringing device only occasionally strays across the patent boundary or is too trifling to justify judicial intervention, but does not note any cases where this theory was successful.⁸⁹ Reinforcing the theory that intent is irrelevant, the Sixth and Eighth Circuits have held that proving intent is not necessary, nor is proving knowledge of the patent's existence.⁹⁰ Most importantly, the Supreme Court in *Florida Prepaid Postsecondary Education Expense Board v. College Savings Bank* explicitly held that intent is not an element of infringement.⁹¹

⁸⁰ DONALD S. CHISUM, CHISUM ON PATENTS § 16.02(4)(c) (Matthew Bender & Co., Inc. 2004).

⁸¹ Clark, *supra* note 69.

⁸² *Schmeiser*, [2004] S.C.R. at 916-17; U.S. Patent No. 5,352,605 (issued Oct. 28, 1993).

⁸³ CHISUM, *supra* note 80, at § 16.02(4)(b).

⁸⁴ *E.g.*, *Monsanto Co. v. Swann*, 308 F. Supp. 2d 937, 941 (E.D. Mo. 2003) ("Planting and harvesting seed is a 'use' under [35 U.S.C. §] 271(a)").

⁸⁵ *Schmeiser*, [2004] S.C.R. at 915.

⁸⁶ *Id.* at 920-21.

⁸⁷ CHISUM, *supra* note 80, at § 16.02(2).

⁸⁸ *Id.*

⁸⁹ Hilary Preston, *Drift of Patented Genetically Engineered Crops: Rethinking Liability Theories*, 81 TEX. L. REV. 1153, 1163-64 (2003).

⁹⁰ *Id.*

⁹¹ 527 U.S. 627, 645 (1999).

¶21 Intent does play some role in the determination of damages.⁹² A willful infringer may have to pay treble damages and attorney's fees if the court deems it necessary to deter future infringers.⁹³ The penalty for unintentional infringement may be damage calculations.⁹⁴ Although Schmeiser was found to have infringed, he considers the litigation a victory since Monsanto was not entitled to damages, court costs or technology fees.⁹⁵

¶22 Intentional infringement is presumed once a defendant has notice that he or she is infringing another's patent.⁹⁶ In the United States, an infringing defendant with no knowledge of infringement (intent) is very rare because most infringers are put on notice before they are sued.⁹⁷ Problems occur with GM plant patents because infringing plants cannot be distinguished from the non-infringing plants without specialized tests or inspections. Once the infringer is put on notice, the process of stopping infringement is not easy. A Catch-22 arises because the only way to identify an infringing plant, aside from microscopic inspection, is to spray Roundup® and see if the crop survives.⁹⁸ This process, however, would destroy all non-infringing canola plants. Also, destroying all of a farmer's plants will not stop infringement because dormant seeds are likely to emerge years later.⁹⁹ In order for a farmer to completely rid his or her fields of GM seeds, the soil must be replaced, which is a very expensive procedure.¹⁰⁰ If replacing the soil is financially infeasible, the farmer's only other option is to tie himself to Monsanto through a license.

VII. THE CONSEQUENCES OF THE *SCHMEISER* DECISION

¶23 The *Schmeiser* case is binding only in Canada, yet this unprecedented case will likely serve as an example for the world to follow.¹⁰¹ Monsanto has filed 100 seed piracy cases in the United States and so far has recovered over \$15 million.¹⁰² To date, Monsanto has prevailed in every case.¹⁰³ Whether the *Schmeiser* case had any influence is not expressly stated in the decisions, although Canadian and U.S. patent principles are so closely related that it appears an American farmer in Schmeiser's case would suffer the same fate.

⁹² 35 U.S.C. § 284 (2000).

⁹³ *Id.*

⁹⁴ Kershen, *supra* note 66, at 583.

⁹⁵ Percy Schmeiser, *Percy Schmeiser Claims Moral and Personal Victory in Supreme Court Decision*, May 22, 2004, <http://www.percyschmeiser.com/decisioncomments.htm>.

⁹⁶ CHISUM, *supra* note 80, at § 16.02(2).

⁹⁷ *Id.* at § 16.02 N. 1 (Supp. 2005).

⁹⁸ Preston, *supra* note 89, at 1159.

⁹⁹ *Id.* at 1160.

¹⁰⁰ *Id.*

¹⁰¹ Stephen Leahy, *Monsanto 'Seed Police' Watching Farmers* (available at LEXIS, IPS-Inter Press Service, Jan. 14, 2005).

¹⁰² Paul Elias, *Saving Seed is Latest Tech Piracy*, Jan. 14, 2005, <http://www.wired.com/news/technology/0,1282,66282,00.html>.

¹⁰³ *Id.*

¶24 Monsanto's position is that a farmer who finds infringing plants should contact them and request removal of the patented plants.¹⁰⁴ This solution, however, will not solve the problem of innocent infringers having to pay Monsanto. Farmers may worry because even if Monsanto removes infringing plants, as demonstrated above, this does not guarantee total eradication of plants containing the patented gene from the farmer's field. Also, what if Monsanto inadvertently destroys non-infringing crops, since it is impossible to distinguish between GM and mundane crops without specialized tests? Would farmers receive compensation from Monsanto for the innocent crops destroyed?¹⁰⁵ Although the farmers took no action in acquiring the gene, they could suffer increased costs and decreased profits in order to deal with the imposing vegetation.

¶25 One of the biggest threats to farmers is the simple fear of being sued and having to pay to defend themselves in court. It may not be a grounded fear that the company will go after every farmer with even a trace of its property on their fields, but the average farmer can hardly be expected to have the resources to defend himself in court should he be found in violation. Monsanto's teams of intellectual property experts and fierce litigators likely create fear that a court will put blame on a farmer for infringement, regardless of his intent to infringe. In addition, there are other economic effects of windblown seeds. Organic farmers can lose their USDA and other organic certifications if contamination is detected, which the American courts have recognized can cause substantial economic losses.¹⁰⁶ European countries and Japan have banned many and in some cases all types of food items containing GMOs.¹⁰⁷

¶26 The goal of patent law is to reward the inventor proportionally to the social benefit. That balance is clearly disrupted by holding non-benefiting users liable for patent infringement.¹⁰⁸ If non-benefiting users are held liable, then costs in the users' enterprise will be greater than the true social cost of the activity, and incentives to engage in that enterprise will be inefficiently low.¹⁰⁹ For example, many farmers in Canada and the United States will find themselves signing Monsanto's technology license instead of going to court to defend themselves.¹¹⁰ In many cases similar to *Schmeiser*, Monsanto may not be entitled to any damages, but Monsanto certainly has significant resources to pursue licenses and intimidate farmers.

¶27 Joe Mendelson, the legal director for the Centre for Food Safety, asserted that "Monsanto's business plan for [GM crops] depends on suing farmers."¹¹¹ The costs of litigation make fighting an issue of infringement unfeasible for most farmers. Schmeiser spent \$400,000 (Canadian) on his battle with Monsanto.¹¹² On Schmeiser's website, he claims to have received hundreds of phone calls from farmers in similar situations.¹¹³

¹⁰⁴ Clark, *supra* note 69.

¹⁰⁵ Aoki, *supra* note 3, at 297; Preston, *supra* note 89, at 1172.

¹⁰⁶ Preston, *supra* note 89, at 1161.

¹⁰⁷ *Id.* at 1162.

¹⁰⁸ Siebrasse, *supra* note 75, at 365-66.

¹⁰⁹ *Id.*

¹¹⁰ Aoki, *supra* note 3, at 297.

¹¹¹ Leahy, *supra* note 101.

¹¹² *Id.*

¹¹³ *Monsanto Harassment Continues to Intensify*, <http://percyschmeiser.com/Harassment.htm> (last visited Nov. 17, 2005).

These farmers have received threatening letters to pay up or go to court.¹¹⁴ The Centre for Food Safety believes that hundreds of farmers have been coerced into paying technology fees to avoid costly litigation.¹¹⁵ With Monsanto's budget of \$10 million and a staff of 75 investigators, it is easy to see that farmers are sorely lacking the legal resources to combat Monsanto.¹¹⁶

¶28 In addition to the disparity in resources between Monsanto and potential defendants in GM seed cases, Monsanto's technology agreements include silencing provisions.¹¹⁷ These silencing provisions make it difficult to estimate how many of Monsanto's investigations, of which there are approximately 500 per year,¹¹⁸ result in licensing agreements. They also make it extraordinarily difficult for farmers to collaborate and learn from the experiences of others in similar situations. The balance between society's gain and Monsanto's reward is heavily skewed in Monsanto's favor.

VIII. TO WHAT EXTENT SHOULD INTENT MATTER IN PLANT PATENT INFRINGEMENT?

¶29 Some critics feel that the element of intent should be an added element to patent infringement of a GM seed.¹¹⁹ Reasons for the addition deal with the GM plant's ability to self-propagate and spread without human intervention or participation.¹²⁰ In addition, truly innocent bystanders will not disrupt patent incentives.¹²¹ Unintentionally possessing farmers will not gain any benefit from their infringement and the patent owner will suffer no loss.¹²² The Canadian Supreme Court considered protection for "innocent bystanders" in *Harvard College v. Canada*¹²³ but refused to comment, concluding that the proposal should be left up to legislators.¹²⁴

¶30 Most critics, however, are against adding the element of intent to infringement of a GMO.¹²⁵ The most persuasive argument stems from the current definition of intent. Intentional infringement occurs when an infringer is aware that something they are utilizing is patented.¹²⁶ In a Roundup Ready® canola case, farmers will almost certainly be aware of the patent; it is the patented object's presence and, therefore, their infringement, of which they may not be aware.¹²⁷

¶31 Requiring a defendant's knowledge of a patent before damages can be awarded encourages patent marking.¹²⁸ Windblown seeds will not benefit from patent marking.

¹¹⁴ *Id.*

¹¹⁵ Leahy, *supra* note 101.

¹¹⁶ *Id.*

¹¹⁷ Schmeiser, [2004] S.C.R. at 933.

¹¹⁸ Elias, *supra* note 102.

¹¹⁹ Preston, *supra* note 89, at 1170.

¹²⁰ *Id.*

¹²¹ Siebrasse, *supra* note 75, at 364.

¹²² *Id.*

¹²³ 2002 Can. Sup. Ct. LEXIS 86 (2002).

¹²⁴ *Id.* at 73-74.

¹²⁵ Siebrasse, *supra* note 75, at 391-92.

¹²⁶ *Id.* at 362.

¹²⁷ *Id.*

¹²⁸ *Id.* at 363; see U.S.P.T.O., *Patent Marking and "Patent Pending,"*

<http://www.uspto.gov/web/offices/pac/doc/general/patpend.htm> (last visited Oct. 4, 2005) ("A patentee

Physically labeling the seed is impractical and once the seed is removed from a labeled bag, it looks like any other canola seed. Another argument against the additional element of infringement is the logistical problem of defining who may use the “innocent bystander” defense.¹²⁹ If an innocent bystander’s fields are contaminated, may the farmer sell his or her seeds to other farmers and continue the practice of saving seeds?¹³⁰ It seems equitable to allow farmers to continue their traditional practices, but if allowed, a trained farmer could concentrate the seed with the patented gene and sell it, thereby acting as a competitor to the patent owner.¹³¹ Even if reselling were disallowed, farmers may take advantage of the seed’s properties after learning of its presence and advantages.¹³²

IX. SHOULD THE STRAY ANIMALS DEFENSE BE APPLICABLE TO PLANT PATENT INFRINGEMENT?

¶32 Schmeiser argued the stray animals defense was analogous and applicable to his case.¹³³ The stray animals defense is a property defense, which states that a person is strictly liable for damage done by a trespassing animal that he or she owns.¹³⁴ In addition, offspring will belong to the person whose land has been trespassed.¹³⁵ Therefore, if applied in a patented seed case, not only would the infringer not be responsible for damages of the stray seed, but the farmer could also recover for trespass and interruption of business in addition to keeping the infringing plants.¹³⁶ Courts do not allow persons who trespass willfully with their animals to benefit from their willful conduct.¹³⁷ The courts in *Schmeiser* concluded that licensing agreements, monitoring of possible infringers, and removal of unintended infringing plants is sufficient action to support the conclusion that Monsanto controlled its patented gene.¹³⁸ Monsanto knew it could not prevent seed from spreading.¹³⁹ But should mere attempts to control the spread of intellectual property be sufficient?

¶33 A comparison of animals and seeds explains why this defense should apply to patented seed cases. First, both are living and reproduce without human intervention. Certainly, in farming, there is some human intervention, but intervention is not required for the plants’ reproduction. Second, there is a stronger reason for the stray animals defense in seed cases because property rights are even harder to detect. Unlike collars or

who makes or sells patented articles, or a person who does so for or under the patentee is required to mark the articles with the word ‘Patent’ and the number of the patent. The penalty for failure to mark is that the patentee may not recover damages from an infringer unless the infringer was duly notified of the infringement and continued to infringe after the notice.”).

¹²⁹ Siebrasse, *supra* note 75, at 378.

¹³⁰ *Id.* at 382.

¹³¹ *Id.*

¹³² *Id.*

¹³³ Br. of Res. ¶ 163, Schmeiser, [2001] F.C.J. 436.

¹³⁴ Kershen, *supra* note 66, at 594.

¹³⁵ Br. of Res. ¶ 164, Schmeiser, [2001] F.C.J. 436; Kershen, *supra* note 66, at 597.

¹³⁶ Br. of Res. ¶ 163, Schmeiser, [2001] F.C.J. 436.

¹³⁷ Kershen, *supra* note 66, at 597.

¹³⁸ 12 C.P.R. (4th) 204, [2001] F.C.J. No. 436(QL).

¹³⁹ Schmeiser, S.C.R. at 933.

branding which are available for animal identification, GM plants can only be distinguished in a laboratory. Additionally, once a farmer discovers an infringing plant, it is more difficult to remove or return that property to its owner. Removing the property is incredibly expensive as discussed above, and return of the property is equally difficult. Finally, pollination actually converts the farmer's property to the patent owner's protected property.

¶34 A critic of the stray animals defense analogized the seeds to escaped pigs.

Now suppose that the escaped pigs did some harm, perhaps by destroying some crops. In that case, it is true that the neighbour should have a remedy against the pigs' owner, but again we would not suggest that the remedy should be that the neighbour can keep the pigs. This is because the harm to the neighbour and the proposed "remedy" are entirely unrelated.¹⁴⁰

¶35 The Supreme Court of Canada in *Schmeiser* rejected the stray animals defense quickly because it did not believe property rights were applicable to patent protection.¹⁴¹ Monsanto had a right to the gene and cell and its exclusive use that is distinguishable from stray animals.¹⁴² Ownership, the Court affirmed, is irrelevant to whether or not something infringes another's property right.¹⁴³

X. CONCLUSION

¶36 "But where a man willfully causes or allows the property of another to be inter-mixed with his own without the other's knowledge or consent the whole belongs to the latter. . . ." ¹⁴⁴ It is true that intellectual property rights are not fully consistent with tangible property rights, but in the case of a farmer unintentionally acquiring a patented seed, intellectual property rights do not seem totally appropriate. The unique nature of a property that can contaminate the property of others and reproduce on its own was not considered by lawmakers when they drafted the Patent Act. Something must be done to protect innocent infringers from liability and coercion while encouraging innovation and reward. Unfortunately, former Monsanto employees hold high positions both in the Department of Agriculture as well as the Food and Drug Administration.¹⁴⁵ These agencies seem unlikely to move in a direction to help farmers battle the aggressive tactics of companies like Monsanto. This situation is truly David versus Goliath, but this time, Goliath is holding all the stones.

¹⁴⁰ Siebrasse, *supra* note 75, at 361.

¹⁴¹ *Schmeiser*, [2004] S.C.R. at 936-37.

¹⁴² Kershen, *supra* note 66, at 600.

¹⁴³ *Schmeiser*, [2004] S.C.R. at 936-37.

¹⁴⁴ J. CROSSLEY VAINES, L.L.M., *PERSONAL PROPERTY* 387 (4th ed. 1967).

¹⁴⁵ Leahy, *supra* note 101.