Court File No. A-367-01
(T-1593-98)

FEDERAL COURT OF APPEAL
(On Appeal from the Federal Court – Trial Division)

BETWEEN:

PERCY SCHMEISER
and
SCHMEISER ENTERPRISES LTD.

Appellants
(Defendants)

- and -

MONSANTO CANADA INC.
and
MONSANTO COMPANY

Respondents
(Plaintiffs)

MEMORANDUM OF FACT AND LAW OF THE APPELLANTS, PERCY SCHMEISER and SCHMEISER ENTERPRISES LTD.

PRIEL, STEVENSON, HOOD & THORNTON
500–321A 21st Street East
Saskatoon SK S7K 0C1

Terry J. Zakreski
Tel: (306) 244-0132
Fax: (306) 653-1118

Solicitors for the Appellants

I. STATEMENT OF FACT

A. *Introduction*

1. The learned Trial Judge made the following findings of fact. The Appellant, Percy Schmeiser ("Mr. Schmeiser"), is an individual who resides near Bruno, Saskatchewan, and has farmed in that region for more than 50 years. Mr. Schmeiser has an extensive history in municipal and provincial politics and as a businessman and adventurer. The Appellant, Schmeiser Enterprises Ltd. ("Schmeiser Enterprises"), is a Saskatchewan Corporation. It has operated the farming business of Mr. Schmeiser since 1996. The shareholders of Schmeiser Enterprises are Mr. Schmeiser and his wife. (Reasons for Judgment ("*Reasons*"), Appeal Book ("**AB**") Vol. 1, p. 18, paras. 6-7)

2. Mr. Schmeiser has grown canola since the 1950's. In 1997 and 1998 Mr. Schmeiser, through Schmeiser Enterprises, farmed 9 quarter sections of land in the Rural Municipality of Bayne. (*Reasons*, **AB** Vol. 1, p. 18, para. 7)

> Note: The quarter sections were not contiguous in the R.M. of Bayne. See the detachable map found in **AB** Vol. 9, first Tab 1, and the physical Exhibit P-53, R.M. map of Bayne with acetate overlays. The fields were identified on discovery and at trial as follows:
>
> NW ¼ 22-39-25 W2 – "Field #1",
> SW ¼ 22-39-25 W2 – "Field #2",
> NW ¼ 15-39-25 W2 – "Field #3",
> SW ¼ 15-39-25 W2 – "Field #4",
> SE ¼ 15-39-25 W2 – "Field #5",
> SE ¼ 20-38-25 W2 – "Field #6",
> NE ¼ 7-39-25 W2 – "Field #7",
> SE ¼ 7-39-25 W2 – "Field #8",
> SE ¼ 9-38-25 W2 – "Field #9".

3. The Respondent, Monsanto Canada Inc. ("Monsanto Canada") is incorporated under the laws of Canada, and has its principal place of business in Mississauga, Ontario. The Respondent, Monsanto Company ("Monsanto U.S.") is incorporated under the laws of the State of Delaware, U.S.A., and has its principal place of business in St. Louis, Missouri, U.S.A. This memorandum will refer to both corporations as "Monsanto" or "the Respondents". (*Reasons*, **AB** Vol. 1, p. 3, para. 4)

4. On February 23, 1993, Monsanto U.S. was issued Canadian Letters Patent No. 1,313,830 (the "Patent") (The Patent is found at **AB** Vol. 2, Tab 1, pp. 234-315) for an invention termed "glyphosate-resistant plants". The patent term ends on February 23, 2010. Monsanto Canada is a licensee under the Patent. (*Reasons*, **AB** Vol. 1, pp. 17-8, para. 5)

5. The Appellants did not at any time sign a Technology User Agreement ("TUA"), the Respondents' form of license for growers of the seed containing the patented gene. (*Reasons*, **AB** Vol. 1, p. 19, para. 8)

B. The Respondents' Patent and Its Licensing

6. The patent in issue is for genetically-engineered genes, and cells containing those genes which, when inserted in plants such as canola, make those plants resistant to glyphosate herbicides such as "Roundup", a Monsanto product. Glyphosate herbicides inhibit the enzyme known as EPSPS, which is required to produce a particular amino acid essential for the growth and survival of a very broad range of plants. Most plants sprayed with Roundup or other glyphosates do not survive. (*Reasons*, **AB** Vol. 1, p. 27, para. 15)

7. Scientists of Monsanto U.S. created a genetic insert known as RT73 which, when introduced into the DNA of canola cells by a transformation vector, confers upon a canola plant a high level of tolerance to glyphosate. Once the modified gene is inserted in the DNA of the plant cells, the plant, its stem, leaves, seeds, etc., contain the modified gene. A plant's progeny will also contain the modified gene. Pollen from a modified plant can cross-pollinate with conventional canola such that the progeny of the conventional canola will also contain the modified gene. (*Reasons*, **AB** Vol. 1, pp. 22-3, para. 16)

8. Glyphosate herbicides such as Roundup have been widely used in Canada for many years. Starting in 1996, Monsanto Canada, through licensing arrangements, began selling canola genetically modified to be tolerant to Roundup under the trademark "Roundup Ready" canola. In 1996 approximately 600 farmers in Canada planted Roundup Ready canola on some 50,000 acres. By 2000, approximately 4.5 to 5 million acres of Roundup Ready canola were planted in Canada by about 20,000 farmers, producing nearly 40% of canola grown in Canada. (*Reasons*, **AB** Vol. 1, p. 23, para. 17)

9. The advantage of a Roundup Ready canola crop is a glyphosate herbicide such as Roundup can be sprayed on the crop after the canola has emerged, killing weeds. This

procedure is said to avoid any need to delay seeding for early weed spraying, to avoid the use of other special types of herbicides, and to eliminate the need for extensive tillage of the land, thus preserving moisture in the ground. (*Reasons*, **AB** Vol. 1, pp. 23-4, para. 19)

10. Monsanto's Patent includes in its disclosure a statement of the objective, and a summary, of the invention. These provide in part (original in **AB** Vol. 2, Tab 1, p. 238, quoted at *Reasons*, **AB** Vol. 1, p. 24, para. 20):

> The object of this invention is to provide a method of genetically transforming plant cells which causes the cells and plants regenerated therefrom to become resistant to glyphosate and the herbicidal salts thereof.
>
> ...
>
> This invention involves a cloning or expression vector comprising a gene which encodes 5-enolpyruvylshikimate-3-phospate synthase (EPSPS) polypeptide which, when expressed in a plant cell contains a chloroplast transit peptide which allows the polypeptide, or an enzymatically active portion thereof, to be transported from the cytoplasm of the plant cell into a chloroplast in the plant cell, and confers a substantial degree of glyphosate resistance upon the plant cell and plants regenerated therefrom.

11. The claims of the invention which in the action were alleged to have been infringed include the following (**AB** Vol. 2, Tab 1, pp. 304-8, *Reasons*, Vol. 1, pp. 24-5, para. 21):

> 1. A chimeric plant gene which comprises:
>
> (a) a promoter sequence which functions in plant cells;
>
> (b) a coding sequence which causes the production of RNA, encoding a chloroplast transit peptide/5-enolpyruvylshikimate-3-phosphate synthase (EPSPS) fusion polypeptide, which chloroplast transit peptide permits the fusion polypeptide to be imported into a chloroplast of a plant cell; and
>
> (c) a 3' non-translated region which encodes a polyadenylation signal which functions in plant cells to cause the addition to polyadenylate nucleotides to the 3' end of RNA;
>
> the promoter being heterologous with respect to the coding sequence and adapted to cause sufficient expression of the fusion polypeptide to enhance the glyphosate resistance of a plant cell transformed with the gene.
>
> 2. A chimeric gene of Claim 1 in which the promoter sequence is a plant virus promoter sequence.
>
> ...
>
> 5. A chimeric gene of Claim 1 in which the coding sequence encodes a mutant 5-enolpyruvylshikimate-3-phosphate synthase (EPSPS).
>
> 6. A chimeric gene of Claim 1 in which the EPSPS coding sequence encodes an EPSPS from an organism selected from the group consisting of bacteria, fungi

and plants.

7. A chimeric gene of Claim 1 in which the chloroplast transit peptide is from a plant EPSPS gene.

...

22. A glyphosate-resistant plant cell comprising a chimeric plant gene of Claim 1.

23. A glyphosate-resistant plant cell of Claim 22 in which the promoter sequence is a plant virus promoter sequence.

...

26. A glyphosate-resistant plant cell of Claim 22 in which the coding sequence encodes a mutant 5-enolpyruvylshikimate-3-phosphate synthase.

27. A glyphosate-resistant plant cell of Claim 22 in which the coding sequence encodes an EPSPS from an organism selected from the group consisting of bacteria, fungi and plants.

28. A glyphosate-resistant plant cell of Claim 22 in which the chloroplast transit peptide is from a plant EPSPS gene.

...

45. A glyphosate-resistant oil seed rape cell of Claim 22.

12. A "chimeric" plant gene is a gene (i.e. DNA) that has been molecularly engineered using multiple sources including plant, viral and bacteria DNA. Claim 1 of the Patent sets out the basic claim to a chimeric plant gene. Claims 2, 5, 6 and 7 are claims dependent upon Claim 1. Claim 22 is also dependent upon Claim 1, and is for a glyphosate-resistant plant cell comprising a chimeric plant gene of Claim 1. Claims 23, 26, 27 and 28 are dependent on Claim 22. Claim 45 is a glyphosate-resistant oil seed rape cell of Claim 22. (*Reasons*, **AB** Vol. 1, pp. 25-6, para. 23)

C. Mr. Schmeiser's Farming Practices

13. As is the practice of a number of canola farmers in the Bruno area, Mr. Schmeiser routinely saved a portion of the canola harvested on his property to serve as seed for the next crop year. Mr. Schmeiser was thus able to avoid purchasing canola seed after 1993, until 1999, and over the years he believes he was able to develop his own strain of canola, which was relatively resistant to various forms of diseases that tend to attack canola. (*Reasons*, **AB** Vol. 1, p. 28, para. 29)

14. The Appellants grow a conventional variety of canola known as Argentine canola. They also grow wheat and peas and, in addition, portions of Mr. Schmeiser's land are subject

to summer fallow from time to time. For a number of years Mr. Schmeiser has chosen to grow canola crops back-to-back in the same fields for a period of up to four years. At trial he asserted that the advantage of such a farming practice is that he may utilize the benefits of fertilizer applied the year before, thereby using less and often creating a greater crop yield in the subsequent years. It is also Mr. Schmeiser's general practice to time the cultivation of his land to avoid tilling potentially diseased plant remains into the soil, reducing the possibility of certain diseases developing in new crops. Mr. Schmeiser says these practices have allowed him to grow canola crops that are relatively free of weeds and the common diseases of blackleg and sclerotinia that plague canola. He claims his canola crops have done better than the average yields in the Bruno area. (*Reasons*, **AB** Vol. 1, pp. 28-9, para. 30)

15. Mr. Schmeiser's general practice is to use chemical herbicides as little as possible. He does, however, use them when necessary for weed control. He prefers to use herbicides that can be incorporated into the soil, unlike Roundup, or those that can be applied in the spring, as they kill weeds when they germinate, thereby preventing the substantial loss of soil moisture that is suffered with the growth of weeds. He believes that herbicide incorporated in the soil will be effective for up to three years. (*Reasons*, **AB** Vol. 1, p. 29, para. 31)

16. Mr. Schmeiser also used Roundup, particularly to burn off his fields before planting or to "chemfallow" fields, and also for spraying for weeds and voluntary plants around power poles and in road ditches. He does not like to use it on a growing crop. He finds that when it is sprayed on a growing crop it leaves a residue that kills a substantial amount of bacteria in the soil, which affects the yield from back-to-back planting and increases the possibility of root diseases, such as blackleg and sclerotinia, in canola. (*Reasons*, **AB** Vol. 1, pp. 29-30, para. 31)

> (Mr. Schmeiser's was testifying about why a herbicide tolerant crop system would not work with his farming methods based upon literature that he has reviewed. (Transcript of Proceedings ("**Trans.**"), *Direct Exam ("DE") of Percy Schmeiser*: Vol. 4 pp. 844-7))

17. In 1998 the Appellants planted canola in all or part of each of the nine fields for a total of 1,030 acres of canola. That crop was planted from seed saved from their 1997 crop. In 1997 six of the same fields, other than Fields #4, #7 and #9, were planted wholly or partly in canola, for a total of 780 acres. The 1997 crop was planted from seed saved from the 1996 crop, when a total of 370 acres of canola was planted in all or parts of Fields #1, #4, #6 and

#7. In the 1996 crop year, from which Mr. Schmeiser's 1998 seed was derived through the 1997 crop, there were five other growers with farms in the Rural Municipality of Bayne No. 371 who grew Roundup Ready canola. One of these farmers, Mr. Huber, a neighbour of Mr. Schmeiser, grew Roundup Ready canola under license from Monsanto on a quarter section just north and west of, and diagonally adjacent to, Mr. Schmeiser's Field #6. There was evidence at trial from Mr. Schmeiser's hired man, Carlyle Moritz, that at the end of the 1996 crop year a substantial amount of canola had blown from Mr. Huber's land on to Field #6. (*Reasons*, **AB** Vol. 1, pp. 30-1, paras. 32-4)

D. The 1997-1998 Crop

18. In 1997 Mr. Schmeiser planted his canola crop with seeds saved from his 1996 crop, seeds which he believed came mainly from Field #1. Roundup-resistant canola was first noticed in his crop in 1997 when, as part of his regular farming practice, Mr. Schmeiser and his hired man, Carlyle Moritz, hand-sprayed Roundup around the power poles and in ditches bordering Fields #1, #2, #3 and #4. These field are adjacent to one another and are located along the east side of the main paved grid road that leads south to Bruno from these fields. Several days later, Mr. Schmeiser noted that a large portion of the plants had survived the spraying with Roundup herbicide. (*Reasons*, **AB** Vol. 1, p. 32, para. 38)

19. In an attempt to determine why the plants had survived, Mr. Schmeiser conducted a test in Field #2. Using his sprayer, he applied Roundup herbicide on a section of that field in a strip along the road. He made two passes with his sprayer set to spray 40 feet, the first weaving between and around the power poles, and the second beyond but adjacent to the first pass in the field and parallel to the power poles. He said the area covered by him was three to four acres, or a "good three acres". After some days approximately 60% of the plants earlier sprayed had persisted and continued to grow. Mr. Schmeiser testified that these plants grew in clumps which were thickest nearest the road and began to thin as one moved farther into the field. (*Reasons*, **AB** Vol. 1, pp. 32-3, para. 39)

20. At harvest Carlyle Moritz, on instruction from Mr. Schmeiser, swathed and combined Field #2. In the first load of seed in the combine, he included swathes from the surviving canola along the roadside. This was then emptied into an old Ford grain truck located in the field. That truck was covered with a tarp and it was later brought into one of Mr. Schmeiser's outbuildings at Bruno. In the spring of 1998, Mr. Schmeiser transferred the

seed from the old Ford truck into another grain truck to the Humboldt Flour Mill ("HFM") for treatment. The treated seed was then mixed with some bin run seed and fertilizer and used to plant the 1998 canola crop. (*Reasons*, **AB** Vol. 1, p. 33, para. 40)

21. The Appellants did not purchase canola seed from 1993 until 1999. In 1999, because this action had been initiated, on the advice of their counsel, the Appellants destroyed all canola seed held from previous crops and purchased an entirely new inventory of seed. (*Reasons*, **AB** Vol. 1, pp. 41-2, para. 59)

E. The 1997 Samples

22. In 1997 Monsanto Canada hired the private investigation firm of Robinson Investigations to take samples of the Appellants' crop. Mr. Wayne Derbyshire, an employee of Robinson Investigations, took pod samples of canola from the west side along the road allowance beside Field #2, and from the south and east sides, along the road allowances bordering Field #5. He said he did not trespass on Mr. Schmeiser's land, taking his samples from the crop apparently planted in the road allowance bordering his fields. Mr. Derbyshire placed his samples of pods from three or four plants in separate bags, marking them for identification with Mr. Schmeiser's name, the date, his own file number and the number of the sample. The samples stayed in Mr. Derbyshire's car until he returned home to Regina and put them in his freezer. On August 27, 1997 they were sent to Robinson Investigations in Saskatoon. (*Reasons*, **AB** Vol. 1, pp. 33-4, para. 41)

23. On September 2, 1997, Mr. Mike Robinson, President of Robinson Investigations, forwarded the samples to Aaron Mitchell, an employee of Monsanto Canada. Mr. Mitchell air-dried the samples, removed seeds from pods and resealed the seeds in envelopes. He delivered the seeds to the phytoton manager at the Crop Science Department of the University of Saskatchewan. Four seeds from each sample were planted for a grow-out test. The remaining seed samples were returned to Mr. Mitchell, who retained those samples until they were delivered to Dr. Keith Downey on January 24, 2000 for the purpose of undertaking a further grow-out test of the 1997samples. (*Reasons*, **AB** Vol. 1, p. 34, para. 42)

24. In the fall of 1997, four seeds of each sample were planted and two to four seeds germinated from each sample. When these reached the three-leaf stage they were sprayed with Roundup herbicide. More than three weeks later, all plants from five of these samples had survived the spraying. One of the Field #5 samples, from which only one seed

germinated, did not produce any Roundup tolerant plants. (*Reasons*, **AB** Vol. 1, para. 43)

25. In March of 1998 Mr. Robinson, on instruction from Monsanto, visited Mr. Schmeiser in Bruno and advised him that he believed that Mr. Schmeiser had grown Roundup Ready canola the previous summer. Mr. Schmeiser says he did not treat seriously the concern raised by Mr. Robinson. (*Reasons*, **AB** Vol. 1, p. 36, para. 45)

26. In early 2000 Dr. Downey arranged for a grow-out test of the seeds retained from the 1997 sample. Mr. Schmeiser and his counsel were present at the commencement of the test. There were differences in the testimony of Dr. Downey and Mr. Schmeiser about the presence of cleaver seeds among the sample seeds. All seeds in the sample provided to Dr. Downey were planted. The grow-out test of the seeds resulted in about 50% of the seeds germinating. All the resulting plants survived the subsequent application of Roundup herbicide. (*Reasons*, **AB** Vol. 1, p. 35, para. 44)

F. Samples from Humboldt Flour Mills ("HFM")

27. In the spring of 1998 Monsanto representatives learned that Mr. Schmeiser had seed treated at HFM and that the HFM had retained samples of his seed. They requested a sample of this seed from HFM. Mr. Schmeiser had not previously used HFM for seed-treating purposes and was not aware that samples were regularly taken by HFM from the seed provided by farmers. HFM provided a portion of these samples to Monsanto without informing Mr. Schmeiser. (*Reasons*, **AB** Vol. 1, p. 36, para. 46)

28. The remaining samples, i.e. those not provided to Monsanto, were kept in the possession of HFM and turned over to its successor the Saskatchewan Wheat Pool. The samples that were provided to the Monsanto representative, Mr. Robert Chomyn, were forwarded to Aaron Mitchell on April 28, 1998. Mr. Mitchell subsequently divided the samples. On January 18, 1999, he sent half of them to Leon Perehudoff of Prairie Plant Systems to conduct further grow-out tests. The surviving plants from the grow-out tests, after having been sprayed with Roundup, were sent to Ms. Doris Dixon of Monsanto U.S. for genetic testing in March of 1999. Mr. Mitchell sent the other half of the sample to Mr. Schmeiser's counsel on April 23, 1999. Counsel in turn delivered them to Mr. Lyle Friesen of the University of Manitoba on August 26, 1999, for the purpose of conducting grow-out tests on behalf of the Appellants. (*Reasons*, **AB** Vol. 1, p. 34, para. 47)

G. 1998 Roadway Samples

29. In late July 1998, Mr. E.L. Shwydyuk, a private investigator with Robinson Investigations, acting for Monsanto, collected random samples of leaves from several canola plants growing in the rights-of-way near the boundary of each of Mr. Schmeiser's nine fields. These were subjected by Mr. Shwydyuk to a "quick test" developed and used by Monsanto for detecting the presence of protein indicative of Roundup Ready canola. Each sample from all the locations tested positive for the presence of the protein. The samples were sent to Robinson Investigations in September and then subsequently forwarded to Ms. Dixon of Monsanto U.S. in St. Louis for molecular analysis. Monsanto U.S.'s molecular tests showed positive results for the presence of the patented gene in all of the samples tested. (*Reasons*, **AB** Vol. 1, p. 38, para. 48)

H. Samples Under Court Order – August 1998

30. On July 30, 1998 a representative of Monsanto telephoned Mr. Schmeiser to ask for permission to enter his fields to take samples from the current canola crop. Mr. Schmeiser denied the request. (*Reasons*, **AB** Vol. 1, p. 38, para. 49)

31. Following this, Monsanto obtained a court order to allow its representatives to take samples from the Appellants' crops. Mr. Schmeiser consented to the order on the understanding that he was to be present when those samples were taken. While the order did not specify an opportunity for him to be present, counsel for the Respondents did undertake by letter to advise his counsel a day before the Respondents' representatives proposed to collect samples, in order to facilitate arrangements for Mr. Schmeiser to attend the sampling. (*Reasons*, **AB** Vol. 1, p. 38, para. 50)

32. On August 13, 1998 Don Todd and James Vancha, representing Robinson Investigations and Monsanto respectively, arrived at the Appellants' farm to take samples under the court order. The Appellants had not received prior notice of their arrival. After speaking to Mrs. Schmeiser at Mr. Schmeiser's residence, they were directed to the field where Mr. Schmeiser was working. They then met Mr. Schmeiser in one of his fields. They testified that Mr. Schmeiser refused to accompany them while they collected samples. Mr. Schmeiser testified they would not allow him to accompany them in the sample taking. Ultimately samples were taken from all of the Appellants' nine fields, three samples from each field, all in the absence of Mr. Schmeiser. (*Reasons*, **AB** Vol. 1, pp. 38-9, para. 51)

33. On completion of the sampling Messrs. Todd and Vancha met with Mr. Schmeiser again in one of his fields and delivered to him a collection of 27 labeled bags containing pod samples, said to be half of the total sample taken in each location, the other half being retained for Monsanto. As each sample was collected, one-half was put in each of two bags, one for Mr. Schmeiser and one for Monsanto. (*Reasons*, **AB** Vol. 1, p. 39, para. 52)

34. Mr. Vancha further divided the samples so as to provide two separate samples for Mr. Aaron Mitchell. The first sample was delivered to Mr. Mitchell on September 8, 1998 and forwarded by Mr. Mitchell to Ms. Dixon of Monsanto U.S. for the purpose of genetic testing. That genetic testing was positive for the presence of the patented gene. The second sample, originally retained by Mr. Vancha and stored in his deepfreeze at home, was given to Mr. Mitchell on January 14, 1999. Mr. Mitchell then used this half to conduct a grow-out test using the facilities of Prairie Plant Systems to grow the seeds and the facilities at the University of Saskatchewan to spray with Roundup. The result of the grow-out test showed Roundup-tolerant canola in the range of 95-98% of the canola sampled. (*Reasons*, **AB** Vol. 1, p. 39, para. 53)

35. The samples that Mr. Schmeiser received from Mr. Vancha, were kept in the root cellar of Mr. Schmeiser's residence. In July of 1999 he conducted his own grow-out test of seeds in the sample and then turned over the balance of the sample to his counsel in August of 1999 to be sent to Mr. Friesen at the University of Manitoba for testing. That testing showed the presence of Roundup tolerant canola at 0-67%. (*Reasons*, **AB** Vol. 1, p. 40, para. 54)

36. In 1999, Mr. Schmeiser learned that the Saskatchewan Wheat Pool still had samples of his seed. The Appellants obtained a portion of those samples on July 9, 1999. Mr. Schmeiser included these in his 1999 grow-out test and then delivered the samples to his counsel in August of 1999, with his copy of the 1998 court order samples, to be forwarded to Mr. Friesen for testing. (*Reasons*, **AB** Vol. 1, p. 40, para. 55)

37. In April of 2000, it was discovered that the Saskatchewan Wheat Pool still portions of the HFM samples. These were sent directly to Mr. Friesen for testing. The samples that were originally received from Mr. Mitchell and delivered to the Appellants' counsel, and those received directly from the Saskatchewan Wheat Pool in April 2000, each had survival rates after spraying with Roundup from 95-98%. (*Reasons*, **AB** Vol. 1, p. 40, para. 55) The

HFM samples obtained by Mr. Schmeiser from the Saskatchewan Wheat Pool when tested, showed a level of Roundup tolerance between 68-69%. (**AB** Vol. 8, p. 1805).

I. Key Factual Findings

38. The Appellants submit that the following are key factual findings made by the learned Trial Judge respecting the appeal:

(a) The seed source for Mr. Schmeiser's crops for each of the years in question came from seed that he had saved from crops grown the previous year. The last time the Appellants purchased canola seed was in 1993.

[*Reasons*: **AB** Vol. 1, p. 28 para. 29 and pp. 41-2 para. 59.]

(b) The Trial Judge did not find that the Appellants sprayed their 1998 canola crop with Roundup after it had commenced growing. He appears to have accepted that they did not, but ruled that it was not necessary for the Appellants to have done so in order to infringe the Patent.

[*Reasons*, **AB** Vol. 1, p. 26-7 para. 25, p. 67 para. 121 and 123.]

(c) The canola crop grown along Fields #1, #2, #3 and #4 in 1997, in particular Field #2 thereof, contained a mixture of Roundup-susceptible (conventional) and Roundup-tolerant canola. In the area that had been sprayed, it was observed that approximately 60% of the canola survived, growing in clumps and thickest nearest the roadway.

[*Reasons*, **AB** Vol. 1, pp. 32-33 para. 39, p. 45 para. 102.]

(d) There was no special effort to segregate. The Trial Judge found that the swathes of the surviving canola in the test strip were *included* with the swathes from Field #2 that went into the old Ford truck. Furthermore, Mr. Schmeiser mixed the seed he had treated at HFM with bin run seed that he had on hand and used that to seed his 1998 crop.

[*Reasons*, **AB** Vol. 1, p. 33 para. 40, p. 60 para. 104.]

39. The initial Statement of Claim of the Respondents made the following accusation:

> 15. The Defendants, at least as early as 1997, obtained canola seeds which are resistant to glyphosate from one or more persons licensed by the Plaintiff, Monsanto Canada Inc. The Defendants have planted or caused to be planted such seed on lands farmed by them including lands in the Rural Municipality of Bayne,

> Saskatchewan. The Defendants have grown and harvested crops grown from said canola seeds. Further, the Defendants have prepared seed from said harvest, including cleaning and treatment with a fungicide, for replanting. The canola seeds and the crops and seeds cultivated and harvested from them are resistant to glyphosate and herbicides such as ROUNDUP which contain glyphosate as the active ingredient.

This allegation was completely withdrawn, along with any claim in respect of the 1997 crop in a subsequent amendment to the pleadings. At trial the Respondents admitted that there was no evidence of Mr. Schmeiser having obtained Roundup Ready canola seed from one of Monsanto's licensed users.

> [**Trans.** Vol. 3, *Cross-Examination ("CE") of A. Mitchell* pp. 561 line 7 to 564 line 12.]

40. Monsanto's own experts testified, as did the experts called by Mr. Schmeiser, that there would be no utility in growing a mixed crop of conventional and glyphosate-tolerant canola.

> [**Trans.** Vol. 3, *CE of A. Mitchell*, p. 555 lines 15-26; **Trans.** Vol. 3, *CE of Dr. R.K. Downey*, p. 681 lines 5-7; **Trans.** Vol. 6, *DE of Dr. R. Van Acker*, p. 1244 lines 22-25.]

41. There was unchallenged evidence that, owing to a farm accident Mr. Schmeiser experienced in the fall of 1997, he relied heavily of Carlyle Moritz, his hired hand, to swath and combine Field #2. Mr. Moritz's evidence was clear that Mr. Schmeiser provided him with no special instructions regarding the area that had earlier been sprayed with Roundup and that contained surviving canola plants. Finally, swathes from outside the area that had been sprayed would have been combined and put in the old Ford Truck.

> [**Trans.** Vol. 5, *DE of Carlyle Moritz*, p. 1080 lines 13-19, p. 1081 lines 2-8, p. 1090 lines 11-15.]

II. STATEMENT OF THE POINTS IN ISSUE

42. The Appellants' 17 Grounds of Appeal can be found in the Appeal Book Volume 1, pp. 3-5. The issues may be summarized as to whether the learned Trial Judge erred in:

(a) interpreting the *Patent Act* and the Patent so as to deprive farmers the ownership of canola plants and seeds containing the patented gene (Appeal Ground #1);

(b) interpreting the *Patent Act* and the Patent so as to deprive farmers of their vested right of being able to save and re-use their own canola seed that may contain the patented gene (Appeal Ground #2);

(c) finding that it is not necessary that a farmer take advantage of the patented gene by in-crop spraying with a glyphosate based herbicide such as Roundup in order to infringe the Patent (Appeal Grounds #s 3-4);

(d) determining that the Respondents had not waived their Patent rights by the "unconfined release" of their invention (Appeal Ground #5);

(e) finding that there was "no evidence" that the canola seed used by the Appellants to seed the 1997 canola crop, included genetically modified seed and pollen carried into Field #6 from a neighbour's field (Appeal Grounds #s 6-8);

(f) giving undue weight and significance to the internal sampling and testing done by the Respondents (Appeal Grounds #s 9-12);

(g) admitting evidence that ought to have been excluded because it was obtained contrary to an undertaking filed with the Court (Appeal Ground # 13);

(h) failing to properly apply the *Charter of Rights and Freedoms* to exclude improperly and/or illegally obtained evidence (Appeal Ground #14);

(i) determining that the Respondents were entitled to the profits made by Schmeiser Enterprises Ltd. on its entire 1998 canola crop (Appeal Grounds #s 15 and 16); and

(j) issuing an injunction that would impair the Appellants from engaging in the traditional farming practice of saving and re-using canola seed during the term of the Patent (Appeal Ground #17)

III. SUBMISSIONS

A. *Interpreting the* Patent Act *and the Patent so as to deprive farmers the ownership of canola plants and seeds containing the patented gene.*

43. At para. 92 and 93 of the learned Trial Judge's Reasons for Judgment (*Reasons*, **AB** Vol. 1, pp. 55-56) he held as follows:

> 92. Thus a farmer whose field contains seed or plants originating from seed spilled into them, or blown as seed, in swaths from a neighbour's land

> or even growing from germination by pollen carried into his field from elsewhere by insects, birds, or by the wind, may own the seed or plants on his land even if he did not set about to plant them. He does not, however, own the right to the use of the patented gene, or the seed or plant containing the patented gene or cell.
>
> 93. I do not agree that the situation is comparable to the "stray bull" cases that recognize that the progeny of stray bulls impregnating cows of another belong to that other, and that the owner of the straying bull may be liable in damages that may be caused to the owner of the cows. Further, the circumstances here are not akin to those cases that the defendants urge are part of the larger law of admixture, where property of A introduced by A without B's intervention to similar property of B from which it is indistinguishable, becomes the property of B. Monsanto does have ownership in its patented gene and cell and pursuant to the *Act* it has the exclusive use of its invention. That is an important factor which distinguishes this case from the others on which the defendants rely.

The Patent Act (hereinafter the "Act") in no way supports the statement that "Monsanto does have ownership in its patented gene and cell." Nothing in s. 42 of the Act, which lists the exclusive rights as the "making, constructing and using the invention and selling it to others to be used", confers ownership, or even possessory rights.

44. The "stray bull" cases, dismissed by the learned Trial Judge, show how the law has traditionally dealt with property issues arising from propagating biological matter. They deal with property and liability issues where a bull belonging to the defendant trespasses on the plaintiff's land and impregnates the plaintiff's cows. In these cases, the plaintiffs were entitled to sole ownership of the offspring and to damages for interruption of business and the stunting of their heifers by early breeding.

> *Popowich* v. *Letweniuk*, [1972] 1 W.W.R. 641 (Sask. D.C.) [Book of Authorities ("**BA**") Tab 1]; *Neeb* v. *Hoffman*, [1989] O.J. No. 302 (Ont. D.C.), online: QL [**BA** Tab 2]; *Weeks* v. *Weeks* (1977), 81 D.L.R. (3d) 371 (P.E.I.S.C.) [**BA** Tab 3]

45. In these cases courts affirmed the common law position that a defendant is absolutely liable for damage done by a trespassing animal that he owns. The common law position has always been that the offspring belongs to the owner of the female where the owner has the animal in possession.

46. The principles dealing with offspring in the "bull" cases are part of the larger law of intermixture. The idea of the "admixture of goods" comes from the Roman law concepts of *confusio* and *conmixtio*. It applies when goods have been mixed together so that they are no

longer distinguishable. The basic premise is this:

> But where a man wilfully causes or allows property of another to be intermixed with his own without the other's knowledge or consent, the whole belongs to the latter ...
>
> J.C. Vaines, *Personal Property* (London: Butterworth's, 1967) at 387 [**BA** Tab 4]

47. Or, as it was simply put in *Colwill* v. *Reeves* (1811), 2 Camp. 575 at 577 [**BA** Tab 5]:

> 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 was his.

48. It follows that a farmer owns any canola seeds or plants growing on his land, even if derived from plants or pollen originating elsewhere. Moreover, a farmer ought not to lose ownership of such seeds or plants, merely because they may contain a gene that Monsanto has patented.

49. The fundamental principle in property law is possession, so much so that possession is *prima facie* proof of ownership.

> M. L. Benson & M.A. Bowden, *Understanding Property: A Guide to Canada's Property Law* (Scarborough: Carswell, 1997) at 25 [**BA** Tab 6]

50. Two things are necessary in order to claim possessory rights: physical control of a property and intention to control the property. A high degree of physical control is necessary before a possessory right will be recognized. However, a person who has actual physical control has *prima facie* right to possession.

> *Young* v. *Hichens* (1844), 6 Q.B. 606 [**BA** Tab 7]

51. What constitutes the requisite high degree of control depends upon the nature of the property in question. One must demonstrate as much control as is practicable in the circumstances and a reasonably clear intention of claiming the property as his own to possess the property.

> *Tubantia (The),* [1924] All E.R. Rep 615 (Adm. Ct.) [**BA** Tab 8]; *State*

of Ohio v. *Shaw*, 65 N.E. 875 (Ohio 1902) [**BA** Tab 9]

52. In order to defeat such a right of possession, a prior possessor must convince the Court that his intention to control the property was clear enough to have established possession at law. He must do all that is practicable to demonstrate his intention to control that property. (*State of Ohio* v. *Shaw, supra* [**BA** Tab 9])

53. A farmer who has canola growing on his property has a high degree of control over the seed and plant and his acts of cultivation indicate a clear intention to control. He has exclusivity over the seed and the plant—they are rooted in his land. The farmer clearly has a *prima facie* right to possession, and thus *prima facie* proof of ownership. The common law grants him legal ownership of the plant and the seed.

54. According to the learned Trial Judge's Reasons, however, a farmer, despite owning the plant and seed, must sacrifice his plant and seed so that Monsanto can obtain its gene and cell. According to the learned Trial Judge's Reasons, Monsanto is permitted to invade the common law property rights of the Appellants in order to assert its patent rights.

55. Yet there is a general presumption of statutory interpretation that Parliament does not intend to take away, or interfere with, the rights of private citizens.

R. Cross, *Statutory Interpretation,* 3[d] ed., by J. Bell & G. Engle (Butterworths: London, 1995) at 178 [**BA** Tab 10]; *Morguard Properties Ltd. et al.* v. *City of Winnipeg,* [1983] 2 S.C.R. 493 at 509 [**BA** Tab 11]

56. This general presumption against interference with citizens' rights applies most rigorously to property rights. It is often said that the protection of property is one of our most fundamental values of Canadian law.

Harrison v. *Carswell,* [1976] 2 S.C.R. 200 at 219 (Dickson J.) [**BA** Tab 12]; and *Colet* v. *R.*, [1981] 1 S.C.R. 2 [**BA** Tab 13]

57. It is a principle of statutory interpretation that: "encroachments on the enjoyment of property should be interpreted rigorously and strictly". (P. Côté, *The Interpretation of Legislation in Canada* (Cowansville: Les Editions Yvon Blais Inc., 1991) at 401 [**BA** Tab 14])

58. As well, the Act is intended to protect intellectual property, not real or personal property which is governed by provincial law. Courts should be reluctant to read the Act as regulating property ownership. The Respondents have no common law claim to the seed or the plants and the Act did not grant them any statutory property or civil rights other than the specific intellectual property monopoly described in s. 42. It was an error for the learned Trial Judge to allow the Respondents' patent rights to be used to acquire property over which they have no ownership or possession, merely because their patented gene happens to be in a seed or plant belonging to a farmer.

B. *Interpreting the* Patent Act *and the Patent so as to deprive farmers of their vested right of being able to save and re-use their own canola seed that may contain the patented gene.*

59. The learned Trial Judge found as a fact that the Appellants' source for the canola seed during the years in question was seed saved from the previous year. The Appellants last bought canola seed in 1993, long before the commercial release of canola containing the Respondents' patented gene. By saving and reusing his own seed, Mr. Schmeiser was engaging in a traditional farming practice. The right of farmers to save and reuse seed is well recognized. When Parliament passed the *Plant Breeders' Rights Act,* S.C. 1990, c.P-14.6 [**BA** Tab 15], it preserved the fundamental right of farmers to save and reuse their own seed while granting rights to those who develop new plant varieties through biotechnology.

60. In the years in question, Mr. Schmeiser simply continued to save and reuse his own canola seed. All that happened to interrupt his farming practice was Monsanto's "unconfined release" of their self-propagating product into the environment.

61. Dr. Keith Downey, a Senior Research Scientist Emeritus with Agriculture and Agri-Food Canada since 1993, testified about the "unconfined release" of the patented gene as follows (**Trans**. Vol. 3, *CE of Dr. R.K. Downey*, pp.716-717):

> Q The growers, as far as you are aware, were not required to keep a buffer zone between the Roundup Ready crop and their other crops?
>
> A No, they weren't because the regulatory agencies had approved the varieties for environmental release so the buffer zones were not required.
>
> Q And the regulatory authorities had approved the unconfined release into the environment of RT73 correct?
>
> A That's correct, yes.

Q That's the Roundup Ready canola, correct?

A That was the original one, but then the ones that were grown in 1996 were a step father than that. In other words they were different varieties and much improved in terms of disease resistant.

Q And the identity preservation program did not require farmers to clean their equipment when they're coming off fields?

A Again, because the environmental release indicated that you handled the crop in a normal manner.

Q And farmers were not required to haul the canola off their land with commercial trucks, I mean haul it from combine to bin with commercial trucks?

A No, I don't believe there was any regulation with regard to that.

Q Nor were they required to tarp their trucks?

A No, there's no law for doing that in Saskatchewan.

Q Again, this is all because the unconfined release into the environment had already been regulatorily approved, correct?

A That's correct.

Q So the identity preservation program was designed to make sure that the Roundup Ready canola got to the right crushing plant, correct?

A It was, yes, that, and it that it did not get where it was not wanted.

Q It wasn't designed to stop the spread of this gene around the countryside?

A That was not the main intent.

62. As established at trial, the "identity preservation program" was instituted by the Saskatchewan Wheat Pool rather than Monsanto because the Saskatchewan Wheat Pool did not wish to have genetically modified canola contaminate its grain exportation system. Farmers signed a contract with the Saskatchewan Wheat Pool to arrange to haul genetically modified canola to commercial crushing plants rather than grain elevators. The program otherwise placed no restrictions on the cultivation of the genetically modified crops. Farmers were permitted to haul their genetically modified canola from field to bin as they saw fit. They were not required to keep a buffer strip. They were not even warned about cross-pollination. The program was dropped in its entirety in 1997 after Asian countries permitted the purchase of genetically modified canola from Canada.

Helge Goodman, Manager of Market Services in the Country Services Division of the Saskatchewan Wheat Pool, **Trans**. Vol. 3, *DE of Helge Goodman*, pp 618 line 21 to 619 line 5; *CE*, p 622 lines 7 to 13, pp 623 line 23 to 624 line 16.

63. As indicated in the testimony of Dr. Downey, the Respondents had obtained regulatory approval for the "unconfined release" into the environment of the gene in issue. Section 107 of the *Seeds Regulations*, C.R.C., c.1400 [**BA** Tab 16] defines this term as "release on an unrestricted basis". "Confined release", by contrast, is defined as "release under conditions intended to minimize the establishment and spread, in the environment, of seed or of genetic material from plants derived from the seed, and the interaction of the seed or genetic material with the environment".

64. Gordon Froehlich, the general manager of Monsanto Canada's seed business for Canada, described the extensive use of the Respondents' genetically modified canola as growing from 50,000 acres in 1996 to 4.5 to 5 million acres by 2000, comprising 38-40% of all the canola acres planted in Canada (**Trans**. Vol. 1, *DE of G. Froehlich*, p. 81 line 21 to p. 82 line 11).

65. The result of the decision of the learned Trial Judge is that no farmer who becomes aware, or ought to be aware, that his canola contains the gene patented by the Respondents will have the right to save and reuse his canola seed. Specifically, the Appellants were deprived of their right to save and reuse canola seed that they had saved from their 1997 production. Moreover, the Appellants were compelled to dispose completely of their seed saved from their 1998 canola crop in order to grow canola in 1999. This forced the Appellants to buy replacement canola seed. This was something that was very difficult for Mr. Schmeiser to do (**Trans**. Vol. 4, *DE of P. Schmeiser*, p. 899 lines 7-21):

> A On the advice of you because you felt that I should use completely new seed for '99. And that — I'd just like to add a few comments to that. I think that after you told me to go and purchase new seed to seed my 1999 crop, I think that was — I think that was one of — I'm sorry. I think that was one of the hardest things I ever had to do because it — I'm sorry — because it was seed that took years to develop and I had to get rid of it. I'm sorry.
>
> MR. ZAKRESKI: My Lord, maybe —
>
> THE COURT: Do you want to take a break?
>
> MR. ZAKRESKI: — we can take a break —
>
> THE COURT: Sure.
>
> MR. ZAKRESKI: — and Mr. Schmeiser can collect himself?
>
> THE COURT: Maybe we can take about 15 minutes?
>
> Would that be agreeable?
>
> (COURT ADJOURNED)

66. It is common for farmers to save and reuse their canola seed. (**Trans.** Vol. 2, *CE of G. Pappenfoot* (former manager of HFM), p. 399, lines 6 to 15, and **Trans.** Vol. 5, *DE of W. Towstego* (owner/operator of Towstego Seeds), p. 1129, lines 11 to 23) An established farmer who for many years has used his land to grow canola by saving and reusing his own canola seed has a vested right to continue to do so. The grant of a patent to the Respondents could not have been intended to strip the Appellants of their vested right. As stated in *Re Metropolitan Film Studios Ltd.* v. *Twickenham Film Studios Ltd. (Intended Action),* [1962] 3 All E.R. 508 at 517 (Ch. D.) [**BA** Tab 17]: "[t]he well established presumption is that the legislature does not intend to limit vested rights further than clearly appears from the enactment".

> See also *Allen* v. *Thorn Electrical Industries Ltd.,* [1968] 1 Q.B. 487 at 508 [**BA** Tab 18]

67. In extending the scope of Monsanto's monopoly this far, the learned Trial Judge erred in law by failing to take into consideration the reasonable interests of the public, according to the rule in *Burton Parsons Chemicals Inc.* v. *Hewlett-Packard (Canada) Ltd.*, [1976] 1 S.C.R. 555 [**BA** Tab 19]. In *Reymes–Cole* v. *Elite Hosiery Co. Ltd.*, [1965] R.P.C. 102 (C.A.) [**BA** Tab 20], Diplock J. refused to provide the plaintiff with a patent over a "tuck" in ladies stockings, because the effect was a natural irregularity in the traditional production system. Making the tuck subject to a patent would have transformed ordinary practice into infringement. Diplock J. considered the scope of the plaintiff's patent in a manner that balanced its interests against the well-established rights of the industry and stated at 117:

> It would seem an odd result of patent law if the plaintiff, by patenting as he has purported to do in the product claims of the specification stockings containing small tucks of this kind, could prevent manufacturers from continuing a process of manufacture which they had previously used in which such tucks were produced accidentally, and from marketing the products of such process which contained an unintentional tuck. In my view, the law does not entail this consequence.

Similarly, the scope of a biotechnology patent should not be so wide as to make exclusive those practices, such as simply planting and saving seed, which have formerly belonged to all farmers.

C. *Finding that it is not necessary that a farmer take advantage of the patented gene by in-crop spraying with a glyphosate based herbicide such as Roundup in order to infringe the Patent.*

1. The Patent is for a gene that confers glyphosate resistance, not a plant or seed.

68. Monsanto itself does not make any canola seed. It licenses seed companies to incorporate the gene in their canola seed. These companies have added the gene to their own distinct varieties of canola and registered such canola under the *Plant Varieties Registration Act*.

> **Trans**. Vol. 1, *DE of G. Froehlich*, pp. 84-85 lines 22-7, *CE*, p. 90 lines 1-15; **Trans**. Vol. 3, *CE of A. Mitchell*, p. 552 lines 3-22, p. 553 lines 3-14 and Exhibit D-3 "List of Canola/Rapeseed Varieties Registered in Canada", **AB** Vol. 8, pp. 1631-1635. The varieties with check marks are Roundup Ready varieties.

69. It was well established at trial that the nature of the invention is a gene that confers glyphosate resistance on a plant such as canola. That is the only purpose or use of the patented gene. Apart from glyphosate resistance, it adds nothing to the existing canola plant. It does not cause the plant to grow or grow differently.

70. One of the inventors of the Patent, Roger Horsch described the invention as involving the introduction of a gene to the plant's genome that was not there before. He testified that the *only* characteristic that it changes is that it gives the plant glyphosate resistance. (**Trans**. Vol. 1, *CE of R. Horsch*, pp. 71-72 lines 25-14)

71. Aaron Mitchell, Monsanto Canada's Biotechnology Manager, testified that Roundup Ready canola looks no different than regular canola; its advantages are all derived from its ability to withstand the application of glyphosate-based herbicide such as Roundup and that there is no advantage to a farmer in growing a mixed crop of conventional and Roundup Ready canola. (**Trans**. Vol. 3, *CE of A. Mitchell*, pp. 554 line 15 to 555 line 26)

72. The learned Trial Judge described the "advantage" of the Patent as follows:

> The advantage of Roundup Ready canola is that it is tolerant to the glyphosate herbicide Roundup which can be sprayed after the desired crop has emerged, killing other plants.

Reasons, **AB** Vol. 1, pp. 23-24 para. 19

73. To grow canola is not to *use* the gene. This is because the gene does not cause the canola to grow. The invention has no utility unless a farmer is spraying his canola with Roundup, intending the canola to survive. Only then is the farmer taking advantage of the patented gene technology.

74. As noted by the learned Trial Judge in his Reasons, "Claim 45 is a glyphosate-resistant oil seed rape cell of Claim 22". (*Reasons*, **AB** Vol. 1, p. 26 para. 22) The claims did not include the plant or any of its seed. The Respondents never claimed that the added gene made any of the plants grow, or grow differently. The Respondents never claimed the natural reproductive characteristics of a canola plant, including the natural generation of propagating pollen and seeds.

75. The learned Trial Judge, however, addressed the nature of the Respondents' Patent as follows (*Reasons*, **AB** Vol. 1, p. 27 para. 26):

> The presence of the chimeric plant gene described in claim 1 is essential for all of the claims. The claims relate to genes and cells which are glyphosate-resistant. Obviously the invention has utility in resistance to glyphosate, but none of the claims specifies this utility nor does it require the use of glyphosate, such as Roundup herbicide, for the invention claimed.

76. The learned Trial Judge made the following statements on the relationship between utility and the scope of the Patent (*Reasons*, **AB** Vol 1, p. 67 para. 122):

> It is accepted, as the defendants urge, that the claims of a patent are to be construed purposefully. That does not mean that the utility of a patent defines or confines its purpose or its possible uses. It is the taking of the essence of the invention without leave or licence of the owner that constitutes infringement. Here the essence of the claims at issue in this case concerns the patented gene invented by Monsanto and the patented plant cells in which the gene may be found. The claims make no specific direction for or reliance upon the use, after germination of the plant containing the patented gene, of Roundup or other glyphosate herbicide as a part of the invention. The invention does improve glyphosate resistance of the plant that includes the patented gene and the cell, but that characteristic is unaffected by use or lack of use of glyphosate herbicides upon the plant once the seed germinates and the plant begins to grow.

77. The learned Trial Judge made an error of law in holding, "That does not mean that the utility of a patent defines or confines its purpose or its possible uses". With respect, "utility" is synonymous with "purpose" or "possible uses". The learned Trial Judge's

statement means that the use of a patent does not determine its use or possible uses. As such, the statement is negatively circular or a "negative tautology". If one focuses on "possible uses", then the sentence may have some rational, non-tautologous meaning, but it would be factually wrong: the only known or possible use of the gene relates to its resistance to glyphosate herbicide. The gene adds nothing to canola's ordinary capacities, such as germination, growth and reproduction, other than the ability to survive the spraying of Roundup.

78. The Trial Judge states (*Reasons*, **AB** Vol. 1, pp. 67-8 para. 123):

> Growth of the seed, reproducing the patented gene and cell, and sale of the harvested crop constitutes taking the essence of the plaintiff's invention, using it, without permission. In so doing the defendants infringed upon the patent interests of the plaintiffs.

79. This statement suggests that the scope of Monsanto's patent extended beyond the resistance of the gene to glyphosate herbicides and included the natural functions of canola seeds — that is their capacity, once they are embedded in the soil, to grow into a plant and reproduce. Such a view ignores both the legal principle that patents are to protect *inventions* — works that are innovative, novel and useful — and the fact that canola itself is not man-made.

2. Mere possession of canola plants or seeds containing the patented gene is not infringement.

80. The rights given to a patent holder under the Act are contained in s. 42. Those rights include "...the exclusive right, privilege and liberty of making, constructing and using the invention and selling it to others to be used...". Infringement is the intrusion upon these enumerated rights.

81. The list does not include the exclusive right to "possess" an invention. In other words, it is not patent infringement merely to possess an invention. As stated in H. G. Fox, *Canadian Patent Law and Practice*, 4th ed., (Toronto: Carswell, 1969) at 383-384 [Tab 21]:

> Mere possession of a patented article may amount to infringement where such possession is unlicensed and where there is present the intention of use to the detriment of the patentee, *but not if there is no intention to use.* (emphasis added)

82. Mr. Schmeiser clearly did not make or construct a gene as taught by the

Respondents' Patent. Such an activity would require sophisticated bio-engineering equipment and training that Mr. Schmeiser did not possess. Further, it was not even alleged that he infringed claims 15 to 21 of the Patent (**AB** Vol. 2, Tab 1, p. 306) pertaining to the "plant transformation vector" used to incorporate the chimeric gene, described in claim 1 of the Patent, into the targeted plant. The sole issue for consideration is whether he has "used" the gene merely by cultivating canola.

83. There are many patent cases where courts have found the possessor of an invention to be a non-user and therefore a non-infringer of the patent. In *Adair* v. *Young,* [1879] 12 Ch. Div. 13 (C.A.) [**BA** Tab 22], for instance, the Court considered whether the master of a ship, which contained pumps patented by the plaintiff, had infringed the plaintiff's patent rights. While the ship was fitted with the plaintiff's pumps, and the master used the ship as a whole, he had not used the pumps themselves. He had not been responsible for their incorporation into the ship and he did not have the authority, as a matter of personal property law, to remove them. Given the possibility of future infringement, the Court restrained the master from making use of the pumps, but according to the judgment of Brett L.J., the plaintiff's patent was not infringed because the pumps had never been used. The Court commented as follows at 20:

> Since the master had no power to say whether he would have them on board or not, he cannot, in my opinion, be said to use them unless he used them as pumps. If they are so used, that is a user by him, but in this case he never did so use them within British waters, and in my opinion, therefore, he never did infringe the patent.

84. Thus, mere possession of a product that has resulted from another's ingenuity does not necessarily amount to use for the purposes of the Act. In order to prove *use*, the patentee has to show that the possessor profited from or employed the specific *advantage* of the article. One can locate this rule in numerous other authorities:

> D. Vaver, *Intellectual Property Law: Copyright, Patents, Trade-marks* (Toronto: Irwin Law, 1997) at 151 [**BA** Tab 23]; S. Thorley et. al., *Terrell on the Law of Patents,* 15th ed., (London: Sweet & Maxwell, 2000) at para. 8.24 [**BA** Tab 24]; H. Fisher & R. Smart, *Canadian Patent Law and Practice* (Toronto: Canada Law Book Company, 1914) at 188 [**BA** Tab 25]; *Badische Anilin and Soda Fabrik* v. *Johnson and Co.* (1897), 14 R.P.C. 919 at 929 (H.L.) [**BA** Tab 26]; *British United Shoe Co.* v. *Collier* (1910), 27 R.P.C. 567 at 571-572 (H.L.) [**BA** Tab 27]; *Meters* v. *Metropolitan Gas Co.* (1907), 24 R.P.C. 506 at 511 (H.C.J.) [**BA** Tab 28]; *Nobel's Explosives Company, Limited* v. *Jones* (1882), 8 A. C. 5 at 13 (H.L.) [**BA** Tab 29]; *Nielson* v. *Betts* (1871), 5 A.C. 1 at 22-23 (H.L.) [**BA**

Tab 30]; and *Pessers, Moody, Wraith & Gurr Ld.* v. *Cresset Automatic Machine Company* (1914), 31 R.P.C. 155 (H.C.J.), aff'd 511 [**BA** Tab 31]

85. The rule is consistent with patent law policy, because the purpose of the Act, as federal law regulating intellectual property rights, is to ensure that patent holders have a commercial incentive for innovation, not to protect the enjoyment of private possession, "...for the market place is the sole preserve of the patentee". (*Smith Kline & French Laboratories Ltd.* v. *Attorney-General*, [1991] 2 N.Z.L.R. 560 at 566 (C.A.) [**BA** Tab 32])

86. It is submitted that the learned Trial Judge erred in law by concluding that the Appellants could have *used* the Patent without having sprayed the 1998 canola crop with a glyphosate-based herbicide such as Roundup. Possession itself did not bestow an advantage on the Appellants; they could not have benefited from the novel and useful ingenuity of the inventors without spraying, for the whole rationale of the invention, the whole purpose of the Respondents' investment of intelligence and resources in its development, was to allow for in-crop spraying of Roundup. In the absence of spraying, the gene was not used by the Appellants and there was no infringement.

3. "Full enjoyment" is not a freestanding patent right.

87. The learned Trial Judge found the Appellants' cultivation of canola crops with plants that contained the patented gene to be an act that infringed upon the "full enjoyment" of the Respondents' monopoly as it appropriated the "essence of an invention". He outlined his approach to the matter of infringement as follows: (*Reasons*, **AB** Vol. 1, pp. 64-5 para. 115):

> ... it is well settled that infringement is any act which interferes with the full enjoyment of the monopoly rights of the patentee as Mr. Justice Rothstein notes in Lishman v. Erom Roche Inc. (1996), 68 C.P.R. (3d) 72 at 77 (F.C.T.D.). Further, intention is immaterial, for "infringement occurs when the essence of an invention is taken", regardless of the intention of the infringer. (See Computalog Ltd. v. Comtech Logging Ltd. (1992), 44 C.P.R. (3d) 77 at 88 (F.C.A.).)"

> See *Lishman* v. *Erom Roche Inc.* (1996), 111 F.T.R. 44 (F.C.T.D.) at para. 16 [**BA** Tab 33]

> While infringement is nowhere defined in the **Patent Act**, any act which interferes with the full enjoyment of the monopoly granted is said to be an infringement.

88. Section 42 of the Act, however, does not mention any right to "full enjoyment"; nor

does it say that any act of "taking" could amount to infringement of patent rights. It simply grants the "...exclusive right, privilege and liberty of making, constructing and using the invention and selling it to others to be used...".

89. The concept of "full enjoyment" is not derived from the Act but from English precedents interpreting a different statute. The Canadian Act does not say that a patentee has the right to "fully enjoy" an invention or products or goods subject to patent rights; such a term might wrongly suggest the broadest possible bundle of property rights, including "possession". Rather, s. 42 grants specific rights over the making, using, and selling of an invention, as well as the licensing of these rights to third parties. As stated by David Vaver, *supra* [**BA** Tab 23]:

> Since the right affects people's liberty to trade, one might expect the words "making, constructing" and so on to be carefully delineated so that anything done outside them would be lawful, however adverse its economic impact on the patentee. Instead, Canadian courts often resort to U.K. precedents on quite different language.

90. Prior to 1977, the British Patent Act, 1949 did not define either infringement or the scope of the monopoly. Rather, a Royal Command in the patent grant itself established the scope of the monopoly. The template for this "Form of Patent" was in the Fourth Schedule to the Patent Act, 1949. (See the reproduction at 591 of T. A. Blanco White, *Patents for Invention* (London: Stevens & Sons Ltd., 1974) [**BA** Tab 34].) The Form of Patent gave a patentee an exclusive right to "make, use, exercise and vend the said invention" but also mentioned that "the patentee shall have and enjoy the whole profit and advantage... of the said invention". Thus, the "full enjoyment" is not of an uncertain or unlimited number of property rights; rather patentees are to enjoy fully the rights of making, using and selling, in a word, the exploitation of the invention. The Royal Command merely adds on the "enjoyment" language to the expressed rights of making, using and selling and it clearly links enjoyment to the beneficial aspect of the patent.

91. Yet in the learned Trial Judge's Decision "full enjoyment" becomes a patent right divorced from the commercial benefits to which it is inextricably linked in the Royal Command. This allowed the learned Trial Judge to apply "full enjoyment" to non-intellectual property rights, such as possession, which is generally covered by the private law of personal property, not the public law of patent incentives. Such an outcome is not consistent with the Royal Command itself.

92. Further, the language of the Royal Command is not and never was part of Canadian Patent legislation. Section 42 alone defines the Canadian patent monopoly and, concomitantly, the meaning of infringement. Vaver, *supra* [**BA** Tab 21], urges that a statutory approach to the meaning of infringement be used:

> Today it is better simply to read and apply the words of the Canadian *Act* directly, presumably in a "fair, large and liberal" way so as to make the monopoly meaningful. Otherwise, applying British glosses on one set of words to interpret a different set of words in a Canadian statute is otiose.

93. Courts in the United States have properly looked to the legislation, insisting on the limitation of patent rights to those enumerated in the Act.

> *Paper Converting Machine* v. *Magna-Graphics Corporation*, 745 F.2d 11 at 26 (F. Cir. 1984) [**BA** Tab 35]; *Bauer & Cie* v. *O'Donnell*, 229 U.S. 1 (3d Cir. 1913) [**BA** Tab 36]

This view is consistent with the above-cited British case law limiting "use" to exploitation privileges, not general, broad or non-commercial rights, such as private possession and enjoyment.

4. Infringement requires commercial exploitation

94. Focusing on the concepts of "full enjoyment" and "taking" rather than the specific words of the Act, led the learned Trial Judge to conclude that merely growing and harvesting seed containing the patented gene amounted to infringement. The Appellants submit that, had the Court concerned itself more with the actual wording of s. 42, it would have questioned whether the Appellants' activities amounted to commercial exploitation of the invention, something which could not occur without the Appellants having sprayed their fields in 1998 with a glyphosate based herbicide such as Roundup.

95. While s. 42 is specific, referring essentially to the making, selling and using of an invention, it is possible when reading these terms together to establish the general field of a patentee's monopoly from the common element in the specifically granted rights. This general field may be fairly described as commercial exploitation. (Vaver, *supra* [**BA** Tab 23])

96. Supportive of the notion that the Act is concerned with commercial exploitation of an invention, section 55(6) exempts "acts done privately and on a non-commercial scale or for a

non-commercial purpose" from the ambit of patent infringement. Statutory reservations for private use in section 55(6) reflect case law, which established a realm of free non-commercial employment or possession, dating back at least as far as *Frearson* v. *Loe*, [1898] 9 Ch. D. 48 [**BA** Tab 37].

97. Furthermore, *beneficial, commercial* or *exploitive* use is the shared meaning of the French and English versions of s. 42. The French versions of "making", "constructing" and "selling" are simply "*fabriquer*","*construire*" and "*vendre*", but rather than paralleling "use" with "*utiliser*", "*employer*" or "*se server de*", the French version employs a word with a more narrow meaning: "***exploiter***". Thus the French version of the Act clearly reflects the patent law policy of providing inventors with a *commercial* monopoly over the advantageous or exploitive use of an invention.

98. Both versions of a bilingual statute are equally authoritative and courts are directed to establish the "shared meaning" of the French and English terms. There is a strong presumption that the "shared meaning" is the meaning intended by Parliament.

> R. Sullivan, *Statutory Interpretation* (Toronto: Irwin Law, 1997) at 91-92 [**BA** Tab 38]; See generally R. M. Beaupré, *Interpreting Bilingual Legislation*, 2d ed. (Toronto: Carswell, 1986)

99. The Appellants submit that this shared meaning of "use" and "*exploiter*", as beneficial use or exploitation, conforms to the commercial nature of patent rights and the reservations for private use as well as the case law limiting "use" to advantageous or beneficial employment. Therefore, mere possession or handling of an invention, where there is no actual or intended exploitation of the novel utility of the invention, is not to "use" or to "*exploiter*" within the meaning of the Act and does not constitute infringement.

100. The learned Trial Judge thus erred when, at para. 122, he held that the Appellants had, by the mere presence of the gene within their crops, "taken" the essence of the Respondents invention. The essence of the invention was not its physical existence, but its novel utility; and the essence of the Respondent's monopoly rights was not possession, but commercial use or exploitation. Because there was no finding that Mr. Schmeiser sprayed the 1998 canola crops with a glyphosate-based herbicide such as Roundup, thus exploiting the patented gene, the Appellants did not infringe the Patent.

D. Determining that the Respondents had not waived their Patent rights by the "unconfined release" of their invention.

101. The Respondents initially obtained a valid patent on subject matter accepted by the Patent Office. The Patent gave to the Respondents certain monopoly rights. Had they been able to maintain control over their invention, the Respondents may have maintained their exclusive rights. Inventions, however, do not usually replicate and invade the property and land of others. Once they released their invention "unconfined" into the environment, the Respondents lost any exclusive rights they may have had. An unconfined and uncontrolled release into the environment is completely inconsistent with exclusive rights. This Honourable Court can find that the Respondents, by this act of release, waived their statutory rights.

102. It is well established law that a party can, by its conduct, implicitly waive a statutory right — whether procedural, substantive or proprietary — that has been enacted for its benefit. This is the meaning of the maxim: "*Quilibet licet renuntiare juri pro se introducto.*" In *Re The Farm Implement Act and The Arbitration Act (In Re Gray Tractor Co. of Canada, Limited and Van Troyen)*, [1925] 1 W.W.R. 513 at 516 (Sask. K.B.) [**BA** Tab 39], the Court approved the following passage from Halsbury's Laws of England:

> Waiver is the abandonment of a right, and is either express or implied from conduct. A person who is entitled to the benefit of a stipulation in a contract or of a statutory provision may waive it...Where the waiver is not express, it may be implied from conduct which is inconsistent with the continuance of the right.
>
> See also: F.A.R. Bennion, *Statutory Interpretation: A Code,* 3d ed., (London: Butterworths, 1997) at 38-41 [**BA** Tab 40]; Côté, *supra* at 207-209 [**BA** Tab 41]

103. *Re Toronto College Street Centre Ltd. and City of Toronto et al.* (1986), 56 O.R. (2d) 522 (C.A.) [**BA** Tab 42] held, at 538, that "waiver" is synonymous with "estoppel" since both principles bar a party from making a claim inconsistent with a previous action or claim. For instance, in the field of intellectual property rights, a patent licensee cannot challenge the validity of the patent, since this would be inconsistent with his previous "approbation" or "election" to recognize the patent.

Copeland-Chatterson Co. v. *Paquette* (1907), 38 S.C.R. 451, at 454 [**BA**

Tab 44]

104. The Court, while apparently not disagreeing that "unconfined release" can result in waiver of patent rights, appears to have decided that such waiver did not occur *in fact* based on Monsanto Canada's patent licensing regime and its efforts to remove plants from fields of farmers who complained of contamination (*Reasons*, **AB** Vol. 1, pp. 56-58 paras 94-7)

105. It is submitted that the learned Trial Judge made an error of mixed fact and law in stating at para. 97 that "the plaintiffs undertook a variety of measures designed to control the unwanted spread of canola containing their patented gene or cell". The fact that the Respondents offered to remove plants from the fields of some farmers may have been curative in some circumstances, but was preemptive in none; indeed, the modest removal program was itself evidence that the Respondents had *already* lost control of their own product.

106. As well, nothing on the learned Trial Judge's list of initiatives — licensing requirements and monitoring and investigating unlicensed potential growers — involved the physical limitation of the patented gene to intended geographical spaces. The essential point is that, because their product could spread itself throughout the countryside (by pollen flow, farming practices and the like), the Respondents were never able to control their invention physically even if they responded to some complaints of contamination.

107. The Respondents' TUA, or "Roundup Ready™ Grower Agreement" (**AB** Vol. 2, tab 2, p. 316) placed no restrictions on growers aimed at reducing (much less preventing) the escape of genetically modified canola. It merely provided as follows:

> The Grower shall use any purchased Roundup Ready™ canola seed for planting one and only one crop for resale for consumption. The Grower agrees not to save seed produced from Roundup Ready canola seed for the purpose of replanting nor to sell, give, transfer otherwise convey any such seed for the purpose of replanting. The grower also agrees not to harvest any volunteer Roundup Ready canola seed crops.

The growers undertook not to harvest any volunteers (canola plants growing where they were not intended), not cause them. The TUA did not require seed segregation, keeping a buffer strip, or restrictions on how the seed is transported. Before signing the TUAs the farmers were required to attend an informational meeting. At these meetings farmers were not warned about cross-pollination. They were not told to keep a buffer strip. They were not told to warn

their neighbours about what they were growing. They were not told to haul the canola around in tightly tarped trucks. After 1997, they were not told to segregate the canola. They were not told to grow it any differently from conventional canola, apart from herbicide usage. (**Trans**., Vol. 3, *CE of A. Mitchell*, pp. 574 line 22 to 575 line 19)

108. Further, there was ample trial evidence, even from the Respondents, that the Respondents could not contain the spread of their invention, even if they had wanted to, and further ample evidence of extensive contamination after their product was released. Aaron Mitchell, the Biotechnology Manager for Monsanto Canada, who was accepted at trial as an expert agronomist and weed control specialist, admitted that "Monsanto always expected that fields of its genetically modified canola would cross-pollinate with fields of regular canola" producing seeds that have the special gene. (**Trans**. Vol. 3, *CE of A. Mitchell*, p. 564 lines 13-24) A single canola plant can produce over two thousand seeds. (**Trans**. Vol. 3, *CE of A. Mitchell*, p. 565 lines 16-19) These seeds, especially because they are from a cultivated crop, can spread to adjoining lands and establish genetically modified plants. The seed can blow off trucks and farm machinery. (**Trans**. Vol. 3, *CE of A. Mitchell*, p. 566 lines 3-10, pp. 566-567 lines 22-6) The seeds can "shell out" and disperse themselves in the wind or be blown great distances over frozen snow. They can be carried by spring run-off. (**Trans**. Vol. 3, *CE of A. Mitchell*, p. 567-568 lines 15-11)

109. There were numerous examples at trial of farmers who chemfallowed a field (sprayed with Roundup so that nothing grew) and then found surviving canola plants that were determined to contain the gene patented by the Respondents.

110. For example, Tony Huether, a farmer in Alberta, planted three different varieties of herbicide-tolerant canola, including Roundup Ready canola, on three separate fields. In 1998 he decided to chemfallow one of his fields using Roundup herbicide and discovered that a substantial amount of canola survived. A subsequent investigation determined that some of the canola was not only resistant to Roundup, but also that gene stacking had occurred, making the canola resistant to Liberty Link as well.

> See: **Trans**. Vol. 3, *CE of A. Mitchell*, pp. 568 line 12 to 570 line18
>
> See also: Exhibit D-4, **AB** Vol. 8, p. 1637

111. Charlie Boser, a farmer near Unity, Saskatchewan discovered some canola growing

in a field that was previously sown to flax, and was chemfallowed. The canola was Roundup-resistant. Mr. Boser complained to Monsanto, who paid individuals to pull out the weeds and refunded Mr. Boser some of his spraying costs.

See: **Trans.** Vol. 3, *CE of A. Mitchell*, pp. 570 line 19 to 572 line 13; **Trans.** Vol. 5, *DE of C. Boser*, pp. 1104 line 7 to 1112 line 26

See also: Photographs of Mr. Boser's land with canola plants — Exhibit D-17, **AB** Vol. 8, pp. 1793-1794

112. Louis Gerwing, a farmer from near Lake Lenore, Saskatchewan, also complained of volunteer Roundup-resistant canola growing in 1999. Mr. Gerwing had grown a cereal crop, other than canola, the year previously. He intended to chemfallow his field but noticed numerous surviving canola plants. Monsanto also collected these.

See: **Trans.** Vol. 3, *CE of A. Mitchell*, pp. 572 line 14 to 573 line 19; **Trans.** Vol. 5, *DE of L. Gerwing*, pp. 1117 line 19 to 1123 line 9

113. The above are examples of farmers discovering volunteer Roundup-resistant canola in fields that were supposed to be chemfallowed. The presence of the Round-up resistant canola in such fields would have been readily apparent. These examples are distinguishable from farmers who might have Roundup-resistant canola plants growing among a standing canola crop. Such farmers are unlikely to be aware of the infiltration since the genetically modified canola looks identical to conventional canola. As stated by Aaron Mitchell, Monsanto's technology is "invisible and renewable." (**Trans.** Vol. 3, p. 562 lines 17-8)

114. There was trial evidence on the manner in which genetically modified canola can spread itself around the countryside by pollen flow and by farming methods. Dr. Downey testified about an incident where a Canadian seed grower suffered contamination even after maintaining a buffer strip of at least 800 meters around its conventional canola. According to Dr. Downey, the source of the contamination was likely a bee carrying pollen from another field some miles away where Roundup Ready canola was being grown. The grower discovered the contamination when its shipment to Europe was rejected because genetically modified canola was detected.

See: **Trans.** Vol. 3, *CE of Dr. R.K. Downey*, pp. 734 line 5 to 735 line 9 and pp. 735 line 19 to 736 line 11

115. Regarding the spread of genetically modified canola by farming practices, trial testimony was given by a Roundup Ready grower, Mr. Borstmayer, who had hauled Roundup Ready canola past each of Mr. Schmeiser's fields in question in the fall of 1997. While hauling, the tarp came loose and "acted like a cyclone" causing substantial seed loss into Mr. Schmeiser's fields. Mr. Borstmayer also testified about bags containing Roundup Ready seed, falling off his truck, breaking, and spilling seeds on the ground.

See: **Trans**. Vol. 5, *DE of E. Borstmayer*, pp. 1149 line 24 to 1160 line 26, in particular pp. 1155 line 12 to 1156 line 16

116. As further evidence of the spread of genetically modified canola by farming methods, the trial judge noted an incident where a Roundup Ready crop grown by Mr. Huber blew into the Appellants' field via wind-blown swaths.

117. Mr. Schmeiser gave extensive evidence respecting the contamination of his fields by Roundup-resistant canola in 1997, 1998, and even in 1999 after he had completely replaced his seed supply. Once the Respondents had served him with their Statement of Claim, Mr. Schmeiser kept meticulous photo evidence of Roundup resistant canola plants growing not only on his own land, but in and around the town of Bruno, Saskatchewan. Ms. Dixon, who was accepted at trial as an expert molecular biologist and an expert in the composition of the Monsanto Roundup Ready canola product, testified that no other commercial variety of canola confers glyphosate tolerance. Further, if a canola plant has glyphosate tolerance, it is likely because of the Respondents' gene (**Trans**. Vol. 1, *CE of D.A. Dixon*, p. 244 lines 10-22).

Trial Testimony of Mr. Schmeiser (Trans. Vol. 4)	**Corresponding photos in the Book of Photographs, Exhibit D-32 (AB Vol. 9). Colour reproductions may be viewed in the physical exhibit tendered at trial.**
pp. 926 line 4 to 932 line 2	Tab 1 pp. 1869-79, 1881, three unnumbered photos then photos 1- 18, 21-2
pp. 935 line 11 to 936 line 18	Tab 1 pp. 1882-4, photos 24-27
pp. 937 line 12 to 938 line 25	Tab 1 pp. 1886-9, photos 32-7
pp. 939 line 21 to 940 line 26	Tab 2 pp. 1897, 1899, photos 10-15

pp. 941 line 14 to 942 line 21	Tab 2 pp. 1901, 1903, 1905 photos 17-20, 23, 26
pp. 944 line 3 to 945 line 1	Tab 4 pp. 1910-11, photos 1-7
pp. 953 line 20 to 954 line 23	Tab 6 pp. 1919-20, photos 2-5
pp. 955 line 16 to 958 line 24	Tab 9-11 pp. 1949, 1951, 1959-61, 1963, photos 3-5, unnumbered (Tabs 10 and 11)
pp. 958 line 25 to 962 line 10	Tab 12 pp. 1971-81, photos 1-10, 12
pp. 962 line 11 to 963 line 25	Tab 14 pp.1993-4, photos 1-3
pp. 967 line 7 to 968 line 21	Tab 17 p 2025-6, photos 1-3, 8

118. The Appellants submit that the Respondents cannot release an invasive and wildly proliferating gene into the environment and then assert exclusive rights over any farmer's canola with which it happens to have incorporated itself. Sanctioning such a conflicting union of legal exclusivity and lack of control will cause patent infringement liability to spread as widely and indiscriminately as the Respondents' gene. This Honourable Court should therefore refuse to enforce the Respondents' exclusivity rights, since they have caused their invention to commingle with the property of others. Their claim to exclusivity is not the fulfillment but the abuse of s. 42.

> D. Huet-Weiller, "Abuse of Copyright as Regards Cinematographic Works" (1996) XXXXVIII Revue Internationale Du Droit D'Auteur 122 [**BA** Tab 45]; *Precision Instrument Manufacturing Co. Et*, 324 U.S. 806, 65 S. Ct. 993, 89 L. Ed. 1381, [1945] SCT-QL 480 No. 377 [**BA** Tab 46]; *Houle* v. *Canadian National Bank*, [1990] 3 S.C.R. 122 [**BA** Tab 47]; *Donohue Forest Products Inc.* v. *Canada*, [2001] T.C.J. No. 392 at para. 60 (T.C.C) [**BA** Tab 48]

119. The Respondents' conduct is also sufficient to imply a licence allowing for mere possession, if, that is, the Court does find that "use" might involve mere possession of the gene. The Court can take the Respondents implicitly to have granted a license for possession to those whose possession may be wholly innocent, because they have not, and do not, intend to spray.

> *Cselko Associates Inc* v. *Zellers Inc* (1992), 44 C.P.R. (3d) 56 (Ont.C.Gen.Div.) [**BA** Tab 49]; *Netupsky* v. *Dominion Bridge Co.*, [1972] S.C.R. 368 [**BA** Tab 50]

E. Finding that there was "no evidence" that the canola seed used by the Appellants to seed the 1997 canola crop, included genetically modified seed and pollen carried into Field #6 from a neighbour's field.

120. The impugned finding of fact can be found in para. 34 of the learned Trial Judge's Reasons (**AB** Vol. 1, pp. 30-31):

> [34] I note that in 1996 one of the licensed farmers, Mr. Huber, a neighbour of Mr. Schmeiser, grew seed under license from Monsanto on a quarter section just north and west of, and diagonally adjacent to, Mr. Schmeiser's field No. 6. It was the evidence at trial of Mr. Schmeiser's hired man, Carlysle Moritz, that at the end of the 1996 crop year, a substantial swath of canola had blown from Mr. Huber's land onto field No. 6. *There was no evidence that seed from Schmeiser's field No. 6 was saved in 1996 to be used as seed for his 1997 crop.* (emphasis added)

121. It would be a different matter if the learned Trial Judge had said there was evidence that he does not accept, as opposed to stating explicitly that "there was no evidence". The former entails a finding of fact that would be reviewable only on the "palpable and overriding" standard. The latter, however, may be reviewed using the standard of correctness. As stated by Kerans J. in *Standards of Review Employed by Appellate Courts,* (Edmonton: Juriliber, 1994) at 76 [**BA** Tab 51]:

> The legal duty of the first judge is to consider all the evidence. If a piece of evidence is ignored by the first judge, the reviewing court would say that the trier was guilty of a "... failure to consider relevant evidence ..." or "... a misapprehension of the evidence..." This is review by the concurrence standard, even though it is sometimes offered in the same breath as a statement of the unreasonableness standard. Similarly, the corollary error, which would be to rely upon non-existent evidence, invites a review on a concurrence basis. These kinds of mistakes are analytical errors.

122. To say that there was "no evidence" shows that the Trial Judge overlooked material evidence in arriving at his decision, as there *was* evidence that the canola seed did form part of the 1997 crop. The *only* evidence as to the source of the seed from year to year came from Mr. Schmeiser. Mr. Schmeiser testified:

Q Where did the seed come from that you used to plant your 1997 canola crop?

A I would have used it from seed, primarily, as I mentioned before, from a summerfallow field the year before, and I would say that it came from field number 1 along, possibly, from another field.

Q And why would you say it came from another field?

A On —

Q Which other field do you mean?

A I do not have any granaries on field number 1.

Q Right.

A And so the grain had to be hauled all to the granaries that are situated — I shouldn't say all the granaries but to the granaries that are situated on field number 6.

Q And what would happen when they got to field number 6?

A In field number 6 it was stored with canola that also came from field number 6.

Q Where is field number 6 in relation to Mr. Huber's crop?

A Field number 6 is directly kitty-corner to Mr. Humber's land.

Q And that was the seed that you used to plant your 1997 canola crop?

A The seed that came from field number 1 and field number 6.

Q Did you use seed from any other sources?

A No.

(**Trans**. Vol. 4, *DE of P. Schmeiser*, pp. 847 line 25 to 848 line 21)

Q Where did the seed come from to plant your 1997 canola crop.

A The seed came from field number 1 and field number 6.

(**Trans**. Vol. 4, *DE of P. Schmeiser*, p.1001 lines 9-10)

123. Schmeiser Enterprises' hired hand, Carlyle Moritz, testified respecting the substantial amount of canola that had blown into field number 6 from Mr. Huber's land (where Roundup Ready canola was being grown) after a heavy windstorm. Mr. Moritz combined this canola and put it into the Appellants' grainery located on that same field.

Trans. Vol. 5, *DE of C. Moritz*, pp. 1088 line 4 to 1089 line17

See also: Exhibit P-53 physical exhibit, Map of Rural Municipality of Bayne No. 37, with acetate overlays

124. The learned Trial Judge actually ignored this evidence twice. Besides not considering it himself, the learned Trial Judge accepted the opinion of Dr. Keith Downey, that the other sources of contamination cited by Mr. Schmeiser could not account for the degree of Roundup-resistant canola plants observed in 1997 on his Field #2. The learned Trial Judge states at para. 118 of his Reasons (*Reasons*, **AB** Vol. 1, p. 66):

> I am persuaded on the basis of Dr. Downey's evidence that on a balance of probabilities none of the suggested possible sources of contamination of Schmeiser's crop was the basis for the substantial level of Roundup Ready canola growing in field number 2 in 1997.

Although Mr. Schmeiser stated in an earlier Affidavit that he believed at that time that the his seed source for 1997 *likely* came from Field #1, Dr. Downey rested his opinion on the seed having come *entirely* from Field #1. (**Trans**. Vol. 3, *CE of Dr. R.K. Downey*, pp. 732 line 24 to 733 line11).

125. When this finding is compared to the Trial Judge's finding that the seed source for Mr. Schmeiser's 1997 crop was from seed that he had saved from his 1996 crop, which in turn was derived from seed that he had saved from his 1995 crop, a factual vacuum is created. If the source of the Appellants' seed for the 1997 crop was from seed that they had saved from 1996, contamination becomes the only means by which the Roundup Ready gene could have infiltrated the Appellants' seed supply.

126. The 1997 canola crop in Field #2 was a mixed crop of approximately 60% Roundup-tolerant plants and 40% Roundup-susceptible plants, where the test strip had been sprayed. Since there is no utility to growing a mixed crop, the only reasonable explanation for the presence of the Roundup tolerant plants in 1997 on Field #2 must have been from contamination.

127. The learned Trial Judge, in relying on Dr. Downey's opinion, clearly did not take into account a critical fact, that being that the windblown swaths from Mr. Huber's field had made their way into the Appellants' seed supply in 1997.

F. Giving undue weight and significance to the internal sampling and testing done by the Respondents

128. The extent to which the Appellants' canola fields contained Roundup-resistant canola

was an important issue at trial. The main competing tests were the internal grow-out tests conducted by Aaron Mitchell of Monsanto (summarized in **AB** Vol. 5 Tab L, p. 1154, **93-99%**), and the grow-out tests done by Lyle Friesen at the University of Manitoba (summarized in **AB** Vol. 8 Tab A, p1805, **0-67.2%**). Neither was of any consequence unless it was clearly established that the samples were fairly representative of the fields from which they were taken. Without this fair representation, any of the testing of the court-ordered samples taken by Mr. Vancha and Mr. Todd only would indicate what is in the bags, not what is in the fields.

129. The samples that were subjected to the grow-out tests were not obtained, stored, or tested by independent third parties. They were not obtained in a scientific manner—rather, they were obtained from three locations on the perimeter of the Appellants' fields. A handful of pods, possibly one plant at each location, was grabbed and divided between two plastic bags. (**Trans**. Vol. 2, *CE of D. Todd*, pp. 311 line 16 to 314 line 2) They were collected in a manner which caused 10 of the 27 samples to deteriorate to the point that they could not be tested at all by Monsanto's labs in St. Louis. (**Trans**. Vol. 1, *CE of K. Beazley*, p. 161 line 15-8) Mr. Schmeiser obtained similar results from 15 of the 27 samples given to him. (**Trans**. Vol. 6, *DE of L. Friesen*, p. 1199 lines 4-14)

130. These samples were never intended to be representative of the Appellants' fields. They were never intended to be the subject of a grow-out test. They were obtained to secure a quick determination that the Respondents' gene was present on the Appellants' fields. (**Trans**. Vol. 2, *CE of J. Vancha*, p. 341 lines 2-15)

131. Regarding the genetic testing done at the Monsanto U.S. laboratories on the 1998 samples, as stated, ten out of the 27 samples did not germinate. The samples that did germinate were "thinned" to 6 plants per sample. The leaf tissue from these six remaining plants was then "pooled" together in a conical tube. According to the DNA analysis witnesses from Monsanto U.S., if only one of these six plants had the gene, the test result would still be positive, notwithstanding that five of the plants may not. (**Trans**., *CE of Kim Beazley*: Vol. 1, pp. 161 line 3 to p. 162 line 25 and p. 164 line 11 to p. 167 line 3; **AB** Vol 3., *CE of Rachel Krieb*, p. 637 line 20 to p. 638 line 9; and **AB** Vol. 3, *CE of Quingyi Zeng*, p. 667 line 9 to 668 line 11)

132. Regarding the HFM samples, all the samples of canola seed made exhibits at trial

which the Appellants had treated at HFM in 1998 were clearly seed that had been cleaned. (**Trans**. Vol. 2, *CE of D. Murray*, p. 426 lines 6-11, **Trans**. Vol. 3, *CE of A. Mitchell*, p. 595 lines 2-18, **Trans**. Vol. 5, *DE of W. Tostego*, pp. 1131 line 21 to 1132 line 10) Mr. Schmeiser took bin-run seed straight from his truck to HFM for treatment. (**Trans**. Vol. 4, *DE of P. Schmeiser*, p. 862 lines 6-19) HFM did not clean seed. Towstego Seeds, as indicated in the testimony of Wayne Towstego, did not clean any of the Appellants' canola seed in 1998. (**Trans**. Vol. 5, *DE of W. Tostego*, p. 1133 lines 8-9) The mystery as to why the HFM samples were all of cleaned canola seed, when Mr. Schmeiser never had his canola seed cleaned, was not answered at trial.

133. No evidence was heard from any person who was supposed to have taken the samples of the Appellants' seed from the truck when they were being treated at HFM. There was, therefore, no way of confirming that the samples taken from HFM were taken of Mr. Schmeiser's seed, or that such samples were taken in a representative manner.

134. As stated, the Appellants were left with a copy of the samples taken in 1998 pursuant to the court order. Mr. Schmeiser used some of the samples to do his own grow-out test in July of 1999. In August of 1999 he delivered the bags to his lawyers who, in turn, sent them to the University of Manitoba for an independent test.

135. Mr. Schmeiser kept the canola samples in his possession since he was given them by Mr. Todd and Mr. Vancha. The samples were kept in their original bags and he made no attempt to remove anything from the bags. There was no finding by the Trial Judge that Mr. Schmeiser in any way tampered with his copy of the samples.

136. Like Mr. Schmeiser, Lyle Friesen of the University of Manitoba could not properly grow out many of the seeds that were given to Mr. Schmeiser. The grow-out in St. Louis was similar to Mr. Friesen's with respect to germination. Both were unable to grow many of the same samples. Mr. Mitchell, however, was somehow able to germinate all the samples.

137. The seed bags that were sent to Mr. Friesen are the original bags given to Mr. Schmeiser and were made an exhibit at trial. They same cannot be said of the sample bags delivered to Aaron Mitchell in January of 1999. For some reason Mr. Mitchell decided to remove all the pods and debris from the samples before passing them on to Leon Perehudoff of Prairie Plant Systems who was to assist him with his grow-out test. When Mr. Perehudoff received the samples, he noted that he only had seeds and it looked as though the seed

samples had been cleaned. (**Trans**. Vol. 2, *CE of L. Perehudoff*, p. 450 lines 12-22)

138. Mr. Mitchell stated that he cleaned the samples by hand sitting in his office by removing and discarding pods and debris. (**Trans**. Vol. 3, *CE of A. Mitchell*, pp. 589 line 1 to 590 line 25) Mr. Friesen testified that it would take several hours to such a task using a screen and a fan, and days to do it by hand. (**Trans**. Vol. 6, *DE of L. Friesen*, p. 1201 lines 16-23)

139. The plants were taken by Mr. Mitchell, who drove away in his van to spray them with Roundup. He returned them to count the survivors with Mr. Perehudoff.

140. With one of the samples from Field #1, Sample C, there was actually an increase in the number of canola plants after spraying, resulting in a percentage of 106% Roundup-resistant canola. This error was not rectified—instead it was averaged with the other results. Furthermore, the results from the samples were pooled together. Two of the samples actually tested at 84% but the results are presented at 93-99%.

141. Mr. Mitchell was not qualified as an expert in herbicide-tolerant grow-out testing, as was Mr. Friesen. There was no statistical information given with his results and no tolerances reported. A lawyer in Ottawa prepared the report based on handwritten notes provided by Mr. Mitchell. (**Trans**. Vol. 3, *DE of A. Mitchell*, p. 544 lines 5-9) This was not a proper scientific test.

142. It also must be remembered that Mr. Mitchell, as a lead investigator for Monsanto, had access to quick-testers during the course of his grow-out test. He admitted during his cross-examination that he probably used them on samples before he tested them. (**Trans**. Vol. 3, *CE of A. Mitchell*, pp. 587 line 25 to 589 line16)

143. Removing the pods and discarding the bags was unnecessary. Furthermore, quick-testing the samples before the grow-out was done leads to serious questions about the neutrality of the testing. There is no means to verify if the sample bags are authentic. They, along with the pods, were thrown in the garbage.

144. Making factual findings based upon the testing of samples of the Appellants' canola was something within the purview of the learned Trial Judge and is, admittedly, subject to review only if he made a palpable and overriding error. (*Glaxo Group Ltd.* v. *Canada (Minister of National Health and Welfare)* 2001 FCA 96, [2001] F.C.J. No. 524 at para. 26

(C.A.) online: QL [**BA** Tab 52]) The Appellants submit, however, that the learned Trial Judge committed a palpable and overriding error to have placed undue weight on such flimsy evidence. All that could safely be said of the sampling and testing of the Appellants' canola was that a degree of Roundup-resistant canola plants were growing on Field #2 in 1997, which formed part of the Appellants' seed supply for 1998.

G. Admitting evidence that ought to have been excluded because it was obtained contrary to an undertaking given to the Court.

145. The Order that permitted the Respondents to take canola samples in 1998 on property belonging to the Appellants can be found in **AB** Vol. 1, pp. 168-170. As noted, the Order was given by consent.

146. Equally important is the undertaking given to the Court dated August 12, 1998, signed by the solicitors for the Respondents. That letter can be found in **AB** Vol. 2, pp. 394-395. The letter was filed "... with the Court to memorialize the undertakings given by the Plaintiffs..." regarding the inspection and sampling of the canola crops of the Appellants by the Court Order. There was to be prior notification, an opportunity for a representative of the Appellants to come along, and the Appellants were to be given a copy of the samples.

147. It is clear that the undertaking was not complied with in that there was no evidence that Mr. Schmeiser's lawyers were contacted in the morning the samples were taken and, further, no representative of the Appellants accompanied the representatives of the Respondents during the sampling.

148. The factual conflict between Mr. Schmeiser on the one hand, and Mr. Vancha and Mr. Todd on the other, as to whether Mr. Schmeiser was precluded from attending and observing the sample taking was not resolved by the learned Trial Judge. Instead, he appears to have dealt with the matter on the basis that the Court Order did not provide that a representative of the Appellants needed to accompany the representatives of the Respondents. This is clear from the learned Trial Judge's Decision at para. 65 (*Reasons*, **AB** Vol. 1, pp. 43-4).

149. It was a clear error of the learned Trial Judge not to treat the filed undertaking given to the Court on behalf of the Respondents as equivalent to an order of the Court. Undertakings given to a court by counsel on behalf of a client have the same effect as if a

Court had ordered them. (*Holmes* v. *Knight and Aubin*, [1944] O.R. 553 (C.A.) [**BA** Tab 53])

150. Because the undertaking was not complied with, it is equivalent to a court order not being complied with, and the proper remedy ought to have been to exclude any evidence derived from the samples that were taken from the Appellants' fields that day.

151. The learned Trial Judge went on to provide, at para. 65 (*Reasons*, **AB** Vol. 1, p. 44):

> It is surprising, if Mr. Schmeiser was refused the opportunity to accompany the samplers, as he claims, that he subsequently made no objection to the sampling by Messrs. Todd and Vancha to the Court, and no mention was made at trial of any objection that may have been made to counsel for plaintiffs following the sampling.

152. By the same token, the Appellants never conceded the admissibility of any evidence derived from the 1998 samples. The Appellants were fully entitled to object at trial to the admissibility of the evidence, which they did, even if they could have brought a motion before trial to exclude it.

H. Failing to properly apply the Charter of Rights and Freedoms *to exclude improperly and/or illegally obtained evidence.*

153. The samples that were taken of Mr. Schmeiser's canola in 1997, and the samples that were obtained from HFM, were each illegally obtained. HFM did not obtain Mr. Schmeiser's permission to retain samples of his property. While HFM may have a legitimate business practice of retaining samples for quality control, it has no right to turn the samples over to the Respondents, or anyone else. The 1997 samples, even though growing in the public rights of way, were clearly property of the Appellants. Monsanto had no right to take this property without the Appellants' consent.

154. The samples taken by Wayne Derbyshire, and those emanating from HFM, were clearly obtained without Mr. Schmeiser's consent and amount to conversion of property belonging to him. Any testing done on such illegally obtained evidence ought to have been excluded by the learned Trial Judge.

155. The common law had previously permitted the introduction of illegally obtained evidence in a civil dispute. (*The King* v. *Honan* (1912), 20 C.C.C. 10 (Ont. C.A.) [BA Tab 54]) Now that s. 8 of the *Charter* states that every citizen has a right not to be subjected to

unreasonable search and seizure, the court should have considered whether the common law rule ought to be corrected by the *Charter.* Even if the *Charter* is intended to apply only to government action, it is part of the fundamental law of Canada and ought to inform the common law. This antiquated rule has no place in our free and democratic society.

156. Where a large multinational company is monitoring canola being grown by farmers with its battalion of private investigators, the Court ought to be sensitive to the need to delineate when evidence will be admitted. If the Court does not define the rights of farmers as against corporations such as the Respondents, and allows the admission of evidence illegally obtained, it will be giving the Respondents the incentive and right to trespass on farmers' lands and take canola samples whenever and however they want, knowing at the end of the day the Court will allow in the evidence. It would, therefore, bring the administration of justice into disrepute to admit such illegally obtained evidence.

I. Determining that the Respondents were entitled to the profits from Schmeiser Enterprises Ltd.'s entire 1998 canola crop

157. As indicated, the monopoly rights of the Respondents extend to "making, constructing and using of the invention and *selling it to others to be used*". Mr. Schmeiser did not sell his 1998 production "to others to be used". That would entail him selling the canola to another farmer, representing it as herbicide-tolerant canola so that the farmer could grow a crop of canola and spray Roundup on it. Rather, the Appellants sold their 1998 production to a grain elevator to be sent to a commercial crushing plant to make the canola seed into canola oil. The presence or absence of Monsanto's patented gene added no value whatsoever to the canola seed which was, clearly, the Appellants' property. For the learned Trial Judge to award the Respondents the entire profit realized by the Appellants from their 1998 canola crop is a windfall to the Respondents merely because their patented gene is present. Since the Appellants did not *use* the patent by spraying a glyphosate-based herbicide such as Roundup on it, they realized no profit or advantage from the presence of the patented gene.

158. It was, accordingly, an error for the learned Trial Judge to award the Respondents the profits from the Appellants' 1998 canola crop.

J. Issuing an injunction that would impair the Appellants from engaging in the traditional farming practice of saving and re-using canola seed during the term of the Patent

159. Mr. Schmeiser clearly testified at trial as to the continuing contamination of his canola fields by the Roundup-resistant canola. After completely replenishing his canola seed in 1999, his fields continued to be contaminated by the Roundup Ready gene.

160. Because he knows or ought to know of the presence of the Roundup-resistant canola, which he has been encountering on an annual basis, the injunction of the Court effectively precludes him from saving and reusing his canola seed during the currency of the Patent. The Appellants are, therefore, compelled to buy new canola seed each year, as reusing any of their canola seed would expose them to breaching the court injunction which extends to any canola seed that may contain the patented gene, no matter how minor in degree.

161. The injunction is, therefore, draconian and underscores the root unfairness in the learned Trial Judge's decision and the unwarranted intrusion into the private property rights of the Appellants that it permits.

IV. STATEMENT OF THE RELIEF SOUGHT

162. The Appellants ask that the Judgment of MacKay, J. dated May 23, 2001 be set aside in its entirety, a judgment of non-infringement be substituted thereon, and the Appellants be awarded their costs throughout.

ALL OF WHICH IS RESPECTFULLY SUBMITTED.

DATED at the City of Saskatoon, in the Province of Saskatchewan, this 3rd day of December, A.D. 2001.

PRIEL, STEVENSON, HOOD & THORNTON

Per: _____

Solicitors on record in the Court below for the Appellants (Respondents), Percy Schmeiser and Schmeiser Enterprises Ltd.

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