

Pure Economic Loss and Non-Adopters: Comparing Liability in Australia, Canada, and the United States

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Australia, Canada, and the United States all allow GM crops to be released into the open environment. In all three jurisdictions, non-adopters of GM crops claim they can no longer choose to be non-adopters. The issue of whether there is a right to choose how to farm that is protected by law is left to the courts in the three jurisdictions. This article considers whether GM-adopting farmers and those creating or distributing GM seeds could be liable to non-adopters for pure economic loss in the three jurisdictions and, thus, whether such a right exists. The study finds that there is unlikely to be liability in the United States, but that liability is theoretically possible in Australia and Canada. It concludes that it is in the interests of all that this policy issue be responded to by government rather than the courts.

Key words: agricultural biotechnology, compensation, economic injury, liability, GM crops, GMOs, negligence.

Introduction

The introduction of transformative technological advancements into the marketplace inevitably creates winners and losers—i.e., the introduction of the computer caused the demise of the typewriter. With genetically modified (GM) crops, those not wanting to adopt GM crops claim they are facing a similar demise. However, this time non-adopters are seeking protection and even compensation rather than just seeking ways to market their product as superior or different and accepting the cost of this market differentiation. Importantly, and perhaps more controversially, included in these claims is the claim that non-adopters can no longer choose to be non-adopters at all. For example, a non-adopter may be unable to pursue their preferred method of farming (such as organic farming) or will need to change agricultural practices or incur additional costs because of the release of GM crops in their region. The essence of the problem has been well stated by some members of the biotechnology industry.

The concept of freedom to farm needs to be given appropriate consideration. We pose the rhetorical question; how far do the rights of organic growers extend before they are able to restrict the ability and freedom of adjacent farmers to make their own decisions with respect to growing non-GM and GM crops in a district? (Australia Department of Agriculture, Fisheries, and Forestry [DAFF], 2003).

Canada, the United States, and Australia all allow GM crops to be released into the open environment and

have left the issue of non-adopters' claims to their courts.¹ There is no provision for compensation under the relevant national regulatory schemes.² But on the other hand, those commercializing GM crops, even in compliance with all relevant regulations, are not given statutory immunity.

It is not intended to discuss or assess the risks or benefits of GM crops in this article. That work has been done elsewhere. Instead, this article considers whether non-adopter rights are developing in the case of GM crops and whether the common law is best suited to those claims. The examination will be undertaken through the lens of liability for pure economic loss (PEL) where there has been no co-mingling or contamination—the most contentious of non-adopters' claims—and considers those claims in the United States, Canada, and Australia. It does this by examining the common-law liability in negligence of both GM-adopting farmers that plant and harvest GM crops (GM adopters) and those creating and distributing GM seeds (GM developers) towards non-GM farmers. The potential liability of regulators and the liability of GM adopters and developers to each other are not considered. Although the issues of breach of duty and causation of harm raise particularly difficult problems in claims of negligently

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1. *Both Canada and the United States have 'right-to-farm' statutes in their provinces and states. These prevent the suing of neighboring farmers for what is considered standard farming practices. This raises the question of when an innovation becomes standard. Australia does not have such statutes.*
 2. *In some Australian states, compensation is available under state legislation in limited circumstances.*

caused PEL, this article considers only whether a duty of care will be owed. This focus has been chosen because the legal concerns taken into account by courts in the duty analysis can be expected to reflect the jurisdiction's concerns and values in the context of innovation. As explained below, whether a duty is owed depends in part on 'a value judgment based on the judiciary's view of community expectations as to the appropriate range of protection to be afforded with respect to the growing of crops' (Lunney & Burrell, 2006, p. 20). It is those 'values' or normative judicial concerns and how they will play out in scenarios involving non-adopters' claims that is of interest in this article. The issue considered here is: under what, if any, circumstances are non-adopters relieved of the usual economic risk and the innovation adopter made to bear it, and are harms such as the loss of opportunity to farm in the manner of the non-adopter's choosing compensable harms in this context?

It is concluded that because responses by the courts to non-adopters' claims are unsatisfactory in some aspects, action by governments is needed to improve the situation if innovation is to be encouraged.

Negligence Causing Pure Economic Loss

It is uncertain whether the choice of non-GM agriculture will be treated preferentially by the common law, but it is clear that the courts of all three jurisdictions are concerned not to unduly interfere with the legitimate pursuit of personal gain. The adequacy of the courts' approach to balancing one person's desire not to adopt a transformative innovation (such as GMOs) against another's desire to adopt that innovation (such as by farming GMOs) is crucial to the successful introduction of any transformative innovation.

PEL can be described as 'an adverse impact on the plaintiff's financial position' due to a change in the value of the plaintiff's assets and/or reduced profitability of the plaintiff's economic activities (Burns & Blom, 2009; Restatement, 2006). It can be expected that there will be some differences between jurisdictions in the classification of harm in this context as property damage rather than PEL, but that issue is outside the scope of this article.

In each of Canada, Australia, and the United States, establishing a duty of care with respect to PEL requires that damage to the plaintiff be reasonably foreseeable. However, because of concerns about the effect of liability, something more is required. A duty of care is not imposed merely because a person knows that their act

may cause economic loss to another (*Cooper v. Hobart*, 2001; *Hill v. Van Erp*, 1997).

A negligence action claiming PEL caused by the release of GM crops is least likely to be successful in the United States because of the 'pure economic loss doctrine' which bars recovery of PEL in certain negligence cases (*Genetically Modified Rice Litigation*, 2009). The rationale for this doctrine is to avoid the imposition of extensive and indeterminate liability (Benson, 2009), such liability potentially imposing 'ruinous consequences on socially useful activity' (Benson, 2009, p. 831).

In Canada, PEL cases are generally categorized into one of five recognized categories of claims (*Canadian National Railway Co. v. Norsk Pacific Steamship Co.*, 1992); the most relevant for these purposes is relational economic loss. Relational economic loss is loss suffered by the plaintiff because the defendant's negligence damages a third party's property. So, for example, if the defendant did indeed contaminate some farmers' crops, other farmers may suffer harm because they are no longer able to sell their crops into their intended markets at all or at the price they expected. Non-adopters claim this result could occur even without actual contamination or co-mingling—merely the threat of such things may be enough to have market repercussions. In that case, there would be no damage to a third party's property and it would not be relational economic loss (*Brooks v. Canadian Pacific Railway Ltd.*, 2007).

Novel Canadian cases not falling into one of the recognized groups require the application of a three-part test. In addition to reasonable foreseeability, the plaintiff must establish proximity between themselves and the defendant, involving the demonstration 'that the defendant was in a close and direct relationship [with the plaintiff] such that it is just to impose a duty of care' (*Edwards v. Law Society of Upper Canada*, 2001, para. 9). Policy considerations arising from the relationship between the parties form part of this proximity analysis (Khoury & Smyth, 2007). Finally, the court considers whether there exist any residual policy considerations justifying denial of liability (*Cooper v. Hobart*, 2001). These include 'the effect of recognizing that duty of care on other legal obligations, its impact on the legal system and,... the effect of imposing liability on society in general' (*Edwards v. Law Society of Upper Canada*, 2001, para. 10), and the fear of indeterminate liability (Khoury & Smyth, 2007).

Australian courts also place heavy emphasis on policy considerations in determining whether there is a duty of care. It is generally agreed that the additional

duty requirement involves consideration of relevant policy or factual considerations (*Perre v. Apand Pty Ltd.*, 1999), which bear on the question of duty of care (Stapleton, 2002). Factors for or against the duty of care must be considered. The Australian High Court considers the following factors as relevant in cases of PEL caused by a negligent act: indeterminacy, unreasonable interference with market competition, control by the defendant over the plaintiff's legal rights, vulnerability of the plaintiff, and the existing statutory regime and common law regulating the relevant act.

A significant difficulty in predicting the outcome of any particular proceeding is that the decision as to what factors are important in any particular case is subjective. Nevertheless, the factors described above include those factors used by US courts to justify the imposition of or departure from the economic loss doctrine as well as those factors assessed by the Canadian courts in their three-part test. They will therefore be considered in more detail below in the context of GM crops following a brief analysis of case law in each jurisdiction regarding non-adopters' PEL claims.

United States

GM Case Law

The US Department of Agriculture (USDA) regulates importation, movement, and field-testing of plants to protect against pest crops. Its current regulations (like those in Canada) mean there is arguably no statutory obligation on GM adopters/developers to contain approved GM crops, and it is the responsibility of non-adopters to take precautions to avoid harm (Smyth, Endres, Redick, & Kershen, 2010). This is in contrast to Australian regulations where responsibilities are often imposed on GM adopters and developers to contain approved GMOs. However, US regulations forbid the escape of GM crops unapproved for commercial production undergoing field trials. US (and Canadian and Australian) regulations can also be relevant to GM food crops. For example, in the US *StarLink Litigation* (2002), GM corn approved only for sale for animal feed and ethanol production entered the human food chain. Contaminated corn products, such as taco shells, were then withdrawn from sale. Many companies—including grain handlers, farmers, food processors, and retailers—then successfully looked to the developer/patent owner, Adventis CropScience (now Bayer CropScience), for compensation (Khoury & Smyth, 2007). However, in the *StarLink Litigation*, the plaintiffs' prop-

erty had been contaminated by the defendant's GM crop. The issue for this article—namely, the situation where there has been no actual co-mingling or contamination but nevertheless there is a claim of a loss of market access or inability to continue to farm in the way the plaintiff had previously done because of the need to take (often expensive) precautions against GM contamination—was not considered.

Pure Economic Loss

In *Sample v. Monsanto Co.* (2003), growers of non-GM soybeans and corn brought a class action against GM seed developers—Monsanto Company, Pioneer Hi-Bred International, Inc., and Syngenta, Inc.—for, inter alia, negligence. Claims of property damage were abandoned. Instead it was alleged that the commercial release of GM crops in the United States caused the loss of markets because of concerns about co-mingling of non-GM crops with GM crops in marketing channels. The Court applied the 'pure economic loss doctrine' to dismiss the claim.

As noted above, the PEL doctrine bars recovery of PEL in a variety of situations if there is no personal injury or physical damage to property other than the property at issue in the case. This rule constrains the foreseeability requirement and thus avoids imposing extensive and indeterminate liability on the defendant (*State of Louisiana ex rel Guste v. M/V Testbank*, 1985). However, individual US states have different rules in relation to the doctrine's application. For example, on hearing motions for summary judgment in the *Genetically Modified Rice Litigation* (2009), Judge Perry noted that Missouri courts have rejected the doctrine if the particular duty alleged to have been breached arose from the common law, as opposed to arising from contract. Further, the doctrine did not apply if, as was the case there, the plaintiffs were claiming damage to other property besides the defective property itself.

Benson, an American commentator, argues that the basis of the economic-loss doctrine is a right-based one (Benson, 2009). He asserts that the imposition of a duty requires both foreseeable harm and misfeasance in the sense that the defendant has interfered with something coming under the plaintiff's exclusive rights as against the defendant. The usual requirement of a proprietary or possessory interest in the damaged property is only one way to show this, albeit a common one. Non-adopters claim to have lost the opportunity to farm as they wish because of the introduction of GM crops. Pursuant to Benson's argument, arguably there is no exclusive right

as against the defendant that has been injured and there should be no duty.

Canada

GM Case Law

In *Hoffman v. Monsanto Canada Inc.* (2007) the Saskatchewan Court of Appeal confirmed that developers of GM canola approved under federal law were not under a duty of care to farmers who claimed economic loss through the loss of the European market for organic canola, loss of the practical option to choose to grow organic canola, and for removal of volunteer GM canola growing on their land. This was because there was insufficient proximity between the parties and there were policy reasons to negate such a duty. Burns and Blom (2009) cite this decision as an example of the prospect of indeterminate liability inhibiting the recognition of a duty where there is no contract or series of contracts in which both parties participated. They assert the indeterminacy lies in the ‘fact that the defendant would be exposed to a liability, the extent of which would be difficult for the defendant to gauge and the risk of which would be difficult or impossible for the defendant to circumscribe’ (Burns & Blom, 2009, p. 393). The Court itself says that the government approval of the unconfined release of the GMO provided a powerful policy reason for negating any duty of care.

Pure Economic Loss

As noted above, so called contractual relational economic-loss cases (where the plaintiff has a contractual relationship with the third person whose property was damaged or interfered with by the defendant) are unlikely to be successful. In *Bow Valley Husky (Bermuda) Ltd. v. Saint John Shipbuilding Ltd.* (1997), the Canadian Supreme Court found that while economic loss was reasonably foreseeable on the facts, the prospect of indeterminate liability meant that there was no duty. Further, other policy concerns pointed to no duty: imposing a duty would not enhance deterrence of negligent conduct (because the owner of the damaged property could already sue the defendant), and the plaintiffs were not vulnerable and could have allocated the risk by contract with the third party.

Non-adopters’ PEL claims are likely to arise where the plaintiff(s) do not have a contractual relationship with the third party but were nevertheless dependant on the characteristics of a third party’s property in some way. Arguably, such claims raise even greater indeter-

minacy concerns and so a duty should be less likely to arise in such cases. However, in *Sauer v. Canada* (2007)—a class action on behalf of Canadian commercial cattle farmers for losses suffered when Canadian beef exports were stopped because of a single case of mad cow disease allegedly caused by the animal eating the defendant’s feed—the Ontario Court of Appeal upheld the motion judge’s refusal to strike out a claim of negligence. The Court said the decision in *Hoffman v. Monsanto Canada Inc.* was of little assistance because it was made in the context of class-action certification. Indeterminacy was, it seems, not of such concern in this case where the parties were ‘part of one integrated industry, from the supply of feed through to the sale of cattle’ (para. 39). In addition to this economic link, there was a regulatory link because feed is regulated nationally ‘in the interests of the participants in it and the public’ (para. 39). Such an approach could also be taken by Canadian courts with GM crops.

Australia

GM Case Law

In Australia, research and development, field trialing, and commercial growing of GM crops is regulated by a federal authority, the Gene Technology Regulator. Some Australian states also have legislation regulating the release of certain GMOs, including some GM crops. There have been no decided cases concerning agricultural GMOs in Australia.

Pure Economic Loss

There is one particularly relevant High Court case concerning claims resulting from agricultural contamination. In *Perre v. Apand Pty Ltd.* (1999), a South Australian (SA) farm was contaminated by a potato disease following the respondent’s illegal supply of infected seed potatoes. The disease caused physical damage to the recipients’ potatoes for which they were compensated. They had suffered property damage because the disease damaged their tangible property, the potatoes. Consequential economic loss such as lost profits they would otherwise have received upon the sale of vegetables grown on the property and the costs of eliminating the disease from their land was also suffered. The respondent was liable in negligence for all such damage.

The Perres were a group of potato producers on properties between roughly 2-3.5 kms around the contaminated farm. Some grew potatoes while others processed and packed them. The disease did not spread to

their properties and they had no contractual relationship with the respondent. However, their businesses were affected by the damage to the neighboring property. Most of the Perres' potatoes were sold in Western Australia (WA) for twice as much as in SA. Upon the outbreak of the disease, the Perres lost their export market. Regulations in WA prohibited the sale of potatoes in WA if grown on a property (or processed with other potatoes grown) within 20 kms of a property infected in the previous five years. Due to those regulations, the entire region lost its export-approved status despite the fact that the disease did not spread beyond the infected property. Landowners also claimed that the value of their land had been reduced because it could not be used for growing potatoes for the WA market.

The Australian High Court unanimously held that the loss suffered by the Perres was PEL and that they should be compensated. The reasons for the decision are discussed in the next section.

Relevant Legal Concerns

Indeterminate Liability

Avoidance of indeterminate liability is a primary concern in PEL cases in all three jurisdictions. It is this concern that makes it unlikely a duty would be found in the United States. Liability is indeterminate when the likely number of claims and the nature of them cannot be realistically calculated (*Perre v. Apand Pty Ltd.*, 1999). In Australia at least, for liability to be determinate the defendant's knowledge need not be of individuals; liability can be determinate when at the time of the negligence the tortfeasor *could* have ascertained the identity of the specific *class* of persons likely to be affected (*Perre v. Apand Pty Ltd.*, 1999). This seems to also be the case in Canada (Stapleton, 2002).

In the case of GMOs, GM adopters and developers would—or should—be aware of the existence of particular markets for non-GMOs and GM developers would/should be aware of regulatory obligations imposed on those growing GMOs. In the words of the *Sauer v. Canada* case, there is perhaps an economic and, at least in Australia where the production of GM crops after approval is regulated, a regulatory link between GM adopters/developers and non-adopters. Further, the number of non-adopters who may be affected is arguably finite and ascertainable (although possibly large). Indeterminacy with respect to non-adopters may therefore not be a basis on which an Australian or Canadian court refuses to find a duty of care.

Unreasonable Interference with Market Competition

Reluctance to interfere with personal autonomy, competitive commercial practice, such practice even involving deliberate action causing economic loss to others, and with the right to legitimately pursue personal gain in business is another primary concern of the courts in all three jurisdictions in PEL claims (Davis, 2000; Linden & Feldthusen, 2006). Courts are reluctant to hamper economic competition in the marketplace by protecting or compensating resultant losses of commercial interests, opportunities, or advantages (McGivern, 2002). Reluctance to interfere with ordinary business conduct or individuals' autonomy is of little relevance though where the defendant already owes a duty of care to do or not to do something to someone other than the plaintiff or where the defendant is doing something illegal (*Perre v. Apand Pty Ltd.*, 1999; Canada, see *Bow Valley Husky (Bermuda) Ltd. v. Saint John Shipbuilding Ltd.*, 1997).

These factors, it is submitted, point to there being no duty owed by GM adopters/ developers with respect to PEL. Besides the duty under consideration, GM adopters/developers will arguably owe no *other* duty of care with respect to GMO releases if no property damage has been or will be caused to non-adopters or other third parties. Further, imposing a duty of care on GM adopters/developers when *lawfully* releasing GMOs to avoid causing PEL to non-adopters is arguably inconsistent with the legitimate pursuit by GM adopters/developers of financial gain. GM adopters/developers, like non-GM farmers, have a commercial interest in crop production. Non-adopters and GM farmers may in some cases be in economic competition with each other. For example, they may both grow canola intended for a particular overseas market. Imposing a duty could hinder competition.

Finally, it could be submitted that non-adopters, by voluntarily adopting self-imposed standards susceptible to adverse consequences if GMOs are released, should not be able to force GM adopters/developers to cease doing something they otherwise could (Cane, 2000). Imposing a duty of care on GM adopters and developers is arguably not in accord with the community standards reflected in the relevant regulations and government policies in all three jurisdictions. In *Perre v. Apand Pty Ltd.* and the US *Starlink Litigation*, the defendant's activity was illegal. GMO releases will be *prima facie* lawful if there has been compliance with the relevant regulations.

If the plaintiff or another person has suffered property damage though, a duty of care with respect to that damage would be owed. Causing property damage to another is not considered legitimate market competition. This may then place the Canadian or Australian GM adopter in the same position as the defendant/respondent in the *Bow Valley Husky (Bermuda) Ltd. v. Saint John Shipbuilding Ltd.* and *Perre v. Apand Pty Ltd.* decisions.

Control by Defendant

That the defendant has control over the enjoyment of a legal right by another, not necessarily the plaintiff, is a factor in favor of a duty with respect to PEL (*Hill v. Van Erp*, 1997).

Non-adopters may argue they have a legal right to pursue any lawful activity on their land, including GM-free agriculture, with no extra costs incurred because of the actions of others and to pursue a premium for being non-GM. The enjoyment of that ‘right’ is affected by GM adopters/developers because their actions determine whether GM-free agriculture remains possible. GM adopters and developers could respond to that—that some (but not all) of the consequences suffered by the non-adopters are outside their control. For example, non-adopters may be unable to export their produce as a non-GM product because of rules of international trade regarding GMO content, they may have to label their produce sold domestically in particular ways because of food or consumer protection legislation, or may lose crop premiums because of the rules of the relevant organic certification scheme. However, that many of the consequences suffered by the non-adopter are outside the control of GM adopters/developers is unlikely to mean GM adopters/developers are not ‘in control.’ It is likely a court would instead consider this all the more reason the GM adopters/developers should ensure that they do not do something putting others at risk of not complying with relevant regulations or requirements (*McMullin v. ICI Operations Pty Ltd.*, 1999). GM adopters and developers could also argue that the relevant regulators are in control: regulations determine whether the activities go ahead. It is true that the relevant regulations determine whether a release can lawfully occur, but it is GM adopters/developers who decide whether to proceed and whether to take precautions. GM adopters/developers know of the risk to others and GM developers, at least, often know the magnitude of the risk (*Woolcock Street Investments Pty Ltd. v. CDG Pty Ltd.*, 2004).

It is therefore submitted that a court would find GM adopters/developers are ‘in control.’

Finally, it could be asserted that choice of method of agriculture, the costs of that chosen method remaining unaffected, and pursuit of a premium for its products are not rights for these purposes. What is included as a right for these purposes is unclear. Anything that can be lawfully done could fall within the term. It is submitted that choice of agricultural style should not and would not be considered a right protected by a duty of care, just as a ‘right’ to trade was considered not to be such a right in *Perre v. Apand Pty Ltd.*

However, a claim to a ‘right’ not to have additional costs imposed by another’s chosen method of agriculture is stronger. But even if the defendant is in control of a risk-producing activity with respect to such a ‘right,’ the plaintiff’s vulnerability to, or special dependence on, the defendant to control the risk or activity is a more important policy factor in PEL cases (Davis, 2000) and is discussed next.

Vulnerability

Protecting the vulnerable is a core value of tort law (Stapleton, 2002). At least two indicators are important in the context of the ‘vulnerability factor’—reliance and assumption of responsibility. Reliance in this context means an expectation by the plaintiff that the defendant will use due care towards them (Baron, 2000, p. 194). The expectation is said to arise from the fact that the defendant knows the plaintiff is depending upon them to use such care. An assumption of responsibility by the defendant to the plaintiff means the defendant has accepted—or is deemed by the law to have accepted by their conduct—that the defendant will be liable to the plaintiff for the consequences of that conduct. Alternatively, the defendant may assume responsibility by generating in the plaintiff an expectation based on the defendant’s conduct that such liability will result.

This approach puts the onus on plaintiffs to protect their own interests and to take steps to avoid or minimize a possible risk of harm to those interests (*Johnson Tiles Pty Ltd. v. Esso Australia Pty Ltd.*, 2003). The court considers whether the plaintiff was entitled to rely, and was reasonable in relying, on the defendant. If there were other steps the plaintiff could and should reasonably take to protect their own economic interests then the plaintiff may not be considered vulnerable and a duty of care may not be owed (Cane, 2000). On the other hand, if a GM adopter’s/developer’s behavior is risky or unreasonable, they may be considered to have

assumed responsibility for the consequences of their conduct and a duty may arise. This factor begins to overlap with that of the defendant's control of the relevant risks. Thus non-adopters could argue that because GM developers choose to release GMOs for commercial gain, and secondly, because they are best able to insure against harm because they have the best knowledge of the possible risks and can offset any costs by passing them onto consumers, they are in control and thus owe a duty to anyone injured by their acts.

In response, given that the release will have been authorized by relevant regulators, GM developers may assert that their conduct is not risky or unreasonable. In granting authorization to release the GMO, regulators must have assessed the science-based risks of harm as objectively manageable and acceptable (Lawson, 2002). GM developers could therefore assert that since the regulators struck a balance between the parties' competing interests, courts should not seek to reopen the matter (*R v. Secretary of State for the Environment and Ministry of Agriculture Fisheries and Food, ex parte Watson*, 1999). However, the regulations do not require consideration of all the harms relevant to a court's assessment of duty. For example, under US, Canadian, and Australian regulations, economic harms caused by GMO releases are irrelevant. Therefore, that a GMO release is authorized does not necessarily mean that a court would consider that the balance has been struck in the right place and that therefore GM adopters/developers have not assumed responsibility for economic harm caused to others when releasing GMOs.

With respect to insurance and cost offsetting, it is submitted that the availability of insurance to GM adopters should not be a determining factor. It is morally incoherent that an equally culpable but uninsurable actor should escape what an insured actor does not and nor should the victim be denied recompense on this basis (Stapleton, 1995). Further, it could be expected to be easier to assess risk in a first-party insurance scenario (e.g., non-adopter purchases insurance to protect against their own risk of PEL) than a third-party insurance scenario (e.g., GM adopter purchases insurance to protect against third-party claims of PEL). GM adopters/developers could also assert that non-adopters are able to protect themselves contractually by charging a premium for the additional costs of avoiding contamination or co-mingling, something that grain farmers—GM or otherwise—cannot usually do. This is a strong argument against a duty of care.

With respect to reliance by the plaintiff on the defendant using due care, McHugh J. in *Perre v. Apand Pty*

Ltd. said that if it was reasonably open to the plaintiff to take steps to protect themselves then there is no need for a duty of care. Canadian courts take a similar view (*Bow Valley Husky [Bermuda] Ltd. v. Saint John Shipbuilding Ltd.*, 1997). In the case of GMOs, non-adopters could take some steps to avoid the risk of economic harm or minimize damage to themselves. For example, non-adopters could change their self-imposed tolerance level for co-mingling with GMOs or not enter into contracts pursuant to which they agree to produce non-GM crops. But even if there are precautions available to non-adopters (which will not always be the case), the crucial issue for the courts is whether it is reasonable to require non-adopters to take them. How reasonableness at this stage is to be determined is not clear. Presumably it involves many of the same considerations relevant when assessing both the defendant's fault at the breach-of-duty stage as well as when considering whether the plaintiff has been contributorily negligent. In that case, the likelihood of economic harm, the gravity of any harm, and the cost and difficulty of taking precautions will all be important. It seems likely that a court will decide, on policy, that tort-law protection should not be denied to plaintiffs who fail to take all but the most straightforward precautions (Fleming, 1995).

Non-adopters may argue they should not be required to take steps to protect themselves. However, in *Perre v. Apand Pty Ltd.*, the appellants were unaware of the risk to them posed by the respondent's act. They therefore could not be said to have been unreasonable in not taking steps to protect themselves and were instead considered vulnerable by the court. In the Canadian decision *Bow Valley Husky (Bermuda) Ltd. v. Saint John Shipbuilding Ltd.*—that the plaintiffs had not allocated risk to another when it could have—was a factor against finding a duty. In GMO cases, non-adopters would or should be aware of the risk to them posed by GM adopters' acts. Non-adopters will know of GM developers' activities at least because of the publicity given to GM crop introduction. Common knowledge means both non-adopters and GM adopters should be aware of the risk of harm to others following GMO releases, even where regulators' approval is obtained. They are therefore not as vulnerable as the parties in *Perre v. Apand Pty Ltd.*

GM adopters/developers may assert that insuring against PEL is a reasonable precaution that could be taken by non-adopters. However, as noted above, it is questionable whether the availability of insurance to either party is relevant or a reasonable precaution (Stapleton, 1995). McHugh J. in *Perre v. Apand Pty Ltd.*

expressly stated that whether the plaintiff is insured is generally irrelevant to the issue of vulnerability. In any case, it seems that it will be difficult for either party to insure with respect to such harm.

What is not clear from the case law though is how much *self-imposed* standards of behavior are relevant where non-adopters have chosen to refuse to adopt an innovation or contract with third parties in a way that requires others also not to adopt an innovation (such as where organic farmers contract with buyers to provide 100% non-GM grain), and it is this which causes them their loss. Certainly during the breach and contributory negligence stages, assessment of the reasonableness of the plaintiff's behavior is against an objective standard of a 'reasonable person' rather than a subjective test of the plaintiff's actual attributes and opinions. Nevertheless, some subjective qualities of the plaintiff are relevant and the crucial concern is whether the choice to be a non-adopter is one that should be taken into account or disregarded as an eccentricity. It is suggested GM adopters/developers would be unsuccessful in having the court find non-adopters not vulnerable just because they have voluntarily chosen to be non-adopters, just as the court is reluctant to unduly interfere with the personal autonomy of the defendant in choosing to adopt an innovation, as discussed above. However, this important issue needs further exploration.

Existing Statutory Regime and Common Law

Where another body of law effectively deals with the economic loss, the court should be slow to use negligence law to impose a duty of care on defendants (*Perre v. Apand Pty Ltd.*, 1999). The effect of recognizing a duty of care on other legal obligations is also relevant in Canadian law (Khoury & Smyth, 2007). That there are regulatory regimes regulating GMO releases is therefore relevant to whether a court should find a duty of care to avoid PEL (*Perre v. Apand Pty Ltd.*, 1999). As a general proposition, courts should not find a duty of care to avoid PEL if the duty would be inconsistent with one imposed by a statutory instrument (*Sullivan v. Moody*, 2001).

GM adopters/developers could make two points here. First, GMOs are subject to a comprehensive international and national regulation and are not prohibited, unlike the situation in *Perre v. Apand Pty Ltd.*, the *US Starlink Litigation* and the Canadian *Sauer v. Canada* case. This is a factor against finding a duty of care. Secondly, in imposing a duty of care on GM adopters/developers with respect to PEL, the law of negligence would

arguably be undermining an already established area of law and government policy—the statutory schemes regulating GMO releases. Finding a duty of care was owed by GM adopters/developers means both parties will need to, in effect, 'second guess' regulators' decisions and not proceed with releases that government, through those regimes, decides can proceed, effectively blocking innovation.

While it is true GMO releases are comprehensively regulated, it is submitted that the above arguments are unlikely to succeed. It is likely that finding a duty to take reasonable care when carrying out authorized releases would not be considered unacceptable interference with the regulatory schemes (*Dovuro Pty Ltd. v. Wilkins*, 2000). Satisfying such a duty of care would not require conduct contrary to such legislation. Furthermore, relevant regulations do not deal with GM developers' liability to others following approved releases. Non-adopters could therefore submit that the government intended the law of negligence to apply concurrently with the legislation. A court is likely to agree and conclude that finding a duty of care is owed by GM developers is not inconsistent with the relevant regulations and does not interfere with decision-making under the statutes. As to the argument that a finding of a duty is contrary to government policy and would effectively block innovation, it is arguable that what courts are considering here is the narrower effect of whether a defendant will have to comply with two inconsistent lawful obligations—such as an obligation imposed by regulation and one imposed by common law. The broader repercussions for society of the existence of a duty, such as discouraging the introduction of an innovation, seem outside the balancing of private interests undertaken in a negligence claim.

Conclusions

Predicting the outcome of negligence actions brought by non-adopters with respect to PEL caused by GMO releases is difficult, particularly because of the importance of the facts of each case and because of the legal concerns relevant in determining whether a duty of care is owed. Different common-law jurisdictions generally take different attitudes toward PEL claims. If it is argued there is nothing special about GM technology compared to other innovative technologies, it makes sense for the relevant courts to follow the precedents of that jurisdiction—such that there is unlikely to be a duty in the United States (*Sample v. Monsanto Co.*, 2003) but may be in Australia and perhaps (in light of *Sauer v.*

Canada), Canada. However, in considering the legal concerns relevant to duty, courts' decisions presumably reflect the attitudes of that country's society regarding those concerns. Those attitudes may show whether the particular society has an innovator or traditional technology bias—particularly their willingness to describe something as a 'worthy harm' that will be compensated through the courts or whether, as evidenced by a finding by their courts of no duty of care for policy reasons, the preference is for the innovator.

The courts in all countries must reconcile two competing interests. Reluctance to unduly interfere with legitimate economic freedom strongly points to no duty being owed by GM adopters/developers in all jurisdictions. However, non-adopters' economic (and personal) freedom to pursue particular types of agriculture incompatible with GMOs is generally vulnerable to GM adopters'/developers' actions. Therefore, in Australia and possibly Canada, unless there is a particular action non-adopters could take to prevent harm, reconciliation is likely to require a duty be found for two reasons.

First, this is consistent with an economic analysis of where responsibility should lie. GM adopters, by growing GMOs, are receiving an economic benefit from the activity causing the harm (Endres, 2000). It is appropriate that they therefore owe a duty when taking such action. Secondly, while non-adopters are also seeking a financial profit and that ambition will often be the motive for their adopting self-imposed limitations such as organic agriculture, that GM agriculture is regulated would only seem to suggest that it is all the more appropriate that a duty to take reasonable care be owed. While it is arguable that non-adopters have chosen to be vulnerable by choosing to remain GM-free (and indeed may seek to profit from doing so) and that imposing a duty on GM adopters/developers creates a new restraint on their legitimate business activities, community standards with respect to culpability where someone interferes with another's pre-existing lawful autonomy and way of life seems to demand a duty be owed.

This outcome may seem legally unwise or economically objectionable to those wanting to introduce GM crops. However, putting to one side that the finding of a duty does not mean GM adopters/developers will be liable in negligence, this reflects an important limitation on the course open to courts. In none of the three countries can the courts consider in the policy analysis relevant to duty of care, the factor of lost opportunity costs and foregone benefits for society, the country or world as a whole. The court in negligence proceedings is balancing private interests. Although during consideration of the

factor of the defendant's economic freedom and market competition generally, it comes close to considering broader picture issues of the effect on the community generally, it is unclear how broadly this is looked at. But arguments based on an overall national or international benefit to be gained by allowing GM crops to be farmed without any duty of care with respect to PEL to non-adopters seems outside the courts' calculations.

It is submitted that it is *not* in non-adopters, GM adopters, developers, or society's best interests that courts in effect determine the type of agriculture farmers can pursue and whether innovations are adopted. First, as shown above, leaving the issue to the courts creates uncertainty. Such uncertainty is undesirable if GMO innovation is to be encouraged. Secondly, private actions between two parties are not the appropriate forum in which to determine whether the social and economic impacts of GMO releases are such that GMO commercialization should or should not proceed. The social and economic interests of the whole society must be adequately weighed in any balancing process. Such matters are complex in terms of the policy decisions that must be made. Policy on the matter should (and probably can only) be determined by government in light of society's best interests, not those of the parties before a court.

By relying on the courts to respond to non-adopters' claims, society is leaving it to the courts to decide whether the right to farm as one chooses is a legal right, the interference with which should be compensated. Deciding that there is no duty may accord with past practices regarding harm based simply on new competition, but it is new ground where claims of lost opportunity to farm without an innovation are concerned. If courts decide there is a legal duty, that does not answer whether GM agriculture is undesirable or whether protection and compensation should be provided to non-adopters because the remainder of the ingredients, such as lack of reasonable care and causation of actual damage, to succeed in negligence still must be present.

Importantly, lack of clarity as to what that care requires may block or hinder the introduction of a worthwhile innovation. As to what reasonable care should require, it is submitted that GM adopters and developers who comply with the law but nevertheless cause harm to another only because of some self-imposed standard set by the non-adopter should not be liable unless the GM adopter/developer is in some other way 'at fault.' To do otherwise would, in effect, make them strictly liable. Similarly, it is submitted that prohibiting the introduction of GMOs where there are non-

adopters within a particular jurisdiction is not a fair or economically defensible solution. While it is acknowledged that the rights of all farmers should be respected, such a provision would mean that the rights of non-adopters to choose which type of agriculture to pursue would always dominate those of GM adopters.

A suggested practical solution then (for some scenarios at least) lies in the setting of domestic policy and an international trade agreement on low-level and adventitious presence. Such agreements would allow a political decision to be made regarding how to respond to the legal challenges raised by non-adopters balanced against the consequences of not allowing GM agriculture to proceed. Without agreements of this nature, it is conceivable that by the end of the coming decade the innovation of GM crops will simply be mired in a series of liability lawsuits by those claiming a right to be a non-adopter.

References

- Australia Department of Agriculture, Fisheries, and Forestry (DAFF). (2003). *Liability issues associated with GM crops in Australia* (Scoping Study 4 citing Submission No. 42 to the Senate Community Affairs References Committee, Parliament of Australia by Florigene Ltd. & Nugrain Pty Ltd., Canberra, October 2000).
- Baron, A. (2000). The 'mystery' of negligence and economic loss: When is a duty of care owed? *Australian Bar Review*, 19(2), 167-198.
- Benson, P. (2009). The problem with pure economic loss. *South Carolina Law Review*, 60, 823-879.
- Bow Valley Husky (Bermuda) Ltd. v. Saint John Shipbuilding Ltd., SCJ No 111, 3 SCR 1210, 153 DLR (4th) 385 (SCC 1997).
- Brooks v. Canadian Pacific Railway Ltd., SJ No. 367, 283 DLR (4th) 540, SKQB 247 (Saskatchewan, Quebec 2007).
- Burns, P.T., & Blom, J. (2009). *Economic interests in Canadian tort law*. Markham, Ontario: LexisNexis.
- Canadian National Railway Co. v. Norsk Pacific Steamship Co., SCJ No. 40, 1 SCR 1021, 91 DLR (4th) 289 (SCC 1992).
- Cane, P. (2000). The blight of economic loss: Is there life after *Perre v. Apand*? *Torts Law Journal*, 8, 246-263.
- Cooper v. Hobart, 3 SCR 537 (2001).
- Davis, J.L.R. (2000). Liability for careless acts or omissions causing pure economic loss: *Perre v Apand Pty Ltd*. *Torts Law Journal*, 8(2), 123-133.
- Dovuro Pty Ltd. v. Wilkins, 105 FCR 476 (2000).
- Edwards v. Law Society of Upper Canada, 3 SCR 562 (2011).
- Endres, A.B. (2000). 'GMO:' Genetically modified organism or gigantic monetary obligation? The liability schemes for GMO damage in the United States and the European Union. *Loyola Los Angeles International & Comparative Law Review*, 22, 453-505.
- Fleming, J.G. (1995). Tort in a contractual matrix. *Tort Law Review*, 3, 12-25.
- Genetically Modified Rice Litigation, Case No 4:06MD1811 CDP, 2009 US Dist LEXIS 98302 (2009, October 9).
- Hill v. Van Erp, 188 CLR 159 (1997).
- Hoffman v. Monsanto Canada Inc., SJ No 182, 283 DLR (4th) 190, 2007 SKCA 47 (Saskatchewan, Canada, 2007) leave to appeal refused [2007] SCCA No 347 (SCC). The case was appealed to the Canadian Supreme Court but that court declined to hear the case, giving no reasons. *Hoffmann v. Monsanto Canada Inc.*, 2007 CanLII 55334 (SCC).
- Johnson Tiles Pty Ltd. v. Esso Australia Pty Ltd., Aust Torts Reports 81-692; VSC 27 (2003).
- Khoury, L., & Smyth, S. (2007). Reasonable foreseeability and liability in relation to genetically modified organisms. *Bulletin of Science, Technology & Society*, 27, 215.
- Lawson, C. (2002). Risk assessment in the regulation of gene technology under the gene technology act 2000 (Cth) and the gene technology regulations 2001 (Cth). *Environmental and Planning Law Journal*, 19, 195-216.
- Linden, A.M., & Feldthusen, B. (2006). *Canadian torts law* (8th ed). Markham, Ontario: LexisNexis Canada.
- State of Louisiana ex rel Guste v. M/V Testbank, 752 F. 2d 1019, 1023 (5th Cir. 1985).
- Lunney, M., & Burrell, R. (2006). *A farmer's choice? Legal liability of farmers growing crops*. Canberra, Australia: Australian Centre for Intellectual Property in Agriculture, Australian Government.
- McGivern, B. (2002). Tortious liability for (selected) genetic harm: Exploring the arguments. *Torts Law Journal*, 10, 41-64.
- McMullin v. ICI Operations Pty Ltd. (No. 7), 169 ALR 227 (1999).
- Perre v. Apand Pty Ltd., 198 CLR 180 (1999).
- R v. Secretary of State for the Environment and Ministry of Agriculture Fisheries and Food, ex parte Watson, Env. L. R. 310 (1999).
- Restatement (Third) of Torts: Econ. Torts and Related Wrongs §8, at 3 (Council Draft No. 1, 2006).
- Sample v. Monsanto Co., 283 F. Supp 2d (E.D. Missouri 2003).
- Sauer v. Canada (Attorney-General), OJ No. 2443, 31 BLR (4th) 20, 2007 ONCA 454 (Ontario, Canada, 2007). Leave to appeal was refused (sub nom *Canada (Minister of Agriculture) v. Sauer*) [2007] SCCA No 454 (SCC).
- Smyth, S.J., Endres, A.B., Redick, T.P., & Kershen, D.L. (2010). *Innovation and liability in biotechnology: Transnational and comparative perspectives*. Cheltenham, UK: Edward Elgar Publishing, Ltd.

Stapleton, J. (2002). Comparative economic loss: Lessons from case-law-focused 'middle theory.' *UCLA Law Review*, 50, 531-583.

Stapleton, J. (1995). Tort, insurance and ideology. *Modern Law Review*, 58, 820-845.

StarLink (Starlink Corn Products Liability) Litigation, 211 F.Supp.2d 1060, 1062 (N.D. Illinois 2002).

Sullivan v. Moody, 207 CLR 562 (2001).

Woolcock Street Investments Pty Ltd. v. CDG Pty Ltd., HCA 16 (2004).

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