

# MARKET SHARE LIABILITY SHOULDN'T DIE: PROPOSED APPLICATION TO AGRICULTURAL PESTICIDES AND THE NEED TO REFINE THE APPORTIONMENT OF LIABILITY

## I. INTRODUCTION

Market share liability was developed to provide relief to plaintiffs, who had been hideously injured by the diethylstilbestrol (“DES”) drug, from the insurmountable obstacle of proving causation.<sup>1</sup> Where identification of the specific manufacturer was impossible, courts shifted the burden of disproving causation to the defendants.<sup>2</sup> When these defendants were unable to exculpate themselves, liability was set by their respective market share percentages.<sup>3</sup> However, jurisdictions have been reluctant to extend market share liability beyond the DES scenario<sup>4</sup> and have struggled to allocate liability fairly. This Comment will argue that market share liability ought to be extended to injuries derived from exposure to agricultural pesticides and that courts should consider the critical element of manufacturers’ profit margins when apportioning liability.

Courts have lost sight of the spirit behind the market share theory. This oversight prevents the doctrine from achieving its policy objectives and detracts from it reaching maximum fairness. By adding a profit share factoring component, courts could re-invigorate the founding principle, that a wrongdoing defendant manufacturer can better absorb the cost of injury than an innocent plaintiff. The defendant’s percentage of the market should be used as a baseline liability, adjusted up or down depending on the product’s profitability. Utilizing the modifications suggested by this Comment, market share liability, with profit share fac-

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<sup>1</sup> *Sindell v. Abbott Laboratories*, 26 Cal.3d 588 (1980).

<sup>2</sup> *Id.* at 612.

<sup>3</sup> *Id.*

<sup>4</sup> *Smith v. Cutter Biological, Inc., A Division of Miles Inc.*, 72 Haw. 416 (1991) (Applied a market share theory of liability to blood plasma infected with HIV).

toring, should be applied to the injuries resulting from the misapplication of agricultural pesticides. In justifying an application of market share liability outside of DES, this Comment will briefly describe the divergent history of market share liability and will articulate the analytical process each jurisdiction has applied. It will justify why market share liability should be extended to the use of agricultural pesticides. Finally, it will provide two hypothetical analyses to illustrate how a profit share factor-ing component could be used by a plaintiff or between defendants in order to reach a more just outcome.

## II. APPLICATIONS OF MARKET SHARE LIABILITY

### A. "Pure" Market Share Liability

#### i. California/South Dakota/Texas

Naomi Sheiner<sup>5</sup> first conceived of Market Share Liability in her 1978 Fordham Law Review Comment entitled "*DES And A Proposed Theory of Enterprise Liability*."<sup>6</sup> Sheiner was addressing a contemporary problem of tort law and its application to the injuries people were suffering from DES.<sup>7</sup> DES<sup>8</sup> was commonly prescribed to women during pregnancy to help prevent miscarriages from 1938 to 1971.<sup>9</sup> During that time, approximately 300 manufacturers exposed an estimated five to ten million women.<sup>10</sup> DES was subsequently proven to cause numerous health problems in women.<sup>11</sup> Because many of these injuries did not

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<sup>5</sup> New York City Law Department, <http://www.nyc.gov/html/law/html/directory/naomi.shtml> (last visited Aug. 19, 2007) (Starting in 1985, Naomi Sheiner was counsel for the City of New York in the General Litigation Division with expertise in civil rights and employment law).

<sup>6</sup> Naomi Sheiner, Comment, *DES and a Proposed Theory of Enterprise Liability*, 46 FORDHAM L. REV. 963 (1977-1978).

<sup>7</sup> *Id.* at 968-971.

<sup>8</sup> *Abel v. Eli Lilly & Company*, 418 Mich. 311, 317 (1984) ("Synthesis of estrogen was first reported by C.E. Dodds, a British researcher, in 1938. Dr. Dodds never patented DES, thus allowing any manufacturer to develop the drug that chose to do so. The Food and Drug Administration "FDA" first granted several companies' request to market DES for non-pregnancy uses in 1941. In 1947, several companies filed supplemental requests to market DES to prevent complications in pregnancy. The FDA granted permission to market the drug for pregnancy uses that same year, and the drug was thereafter generically marketed for pregnancy uses.").

<sup>9</sup> Centers for Disease Control and Prevention, <http://www.cdc.gov/DES/consumers/about/history.html> (last visited Aug. 19, 2007).

<sup>10</sup> *Id.*

<sup>11</sup> *Id.* (Women taking DES experienced a higher rate of birth defects including adenocarcinoma, a rare kind of vaginal and cervical cancer; reproductive tract structural differ-

manifest until decades after exposure, plaintiffs were unable to pinpoint which manufacturer's drug they took. Sheiner suggested that the court address this inequity by holding defendants liable for the share of the market they supplied.<sup>12</sup> In 1980, *Sindell v. Abbott Laboratories* was the first case to apply this radical new notion.<sup>13</sup>

In *Sindell*, the plaintiff was exposed to DES *in utero*<sup>14</sup> (ingested by her mother), causing a malignant tumor decades later.<sup>15</sup> Due to the lapse in time, the plaintiff was unable to determine who manufactured the pill. The California Supreme Court recognized the inequity facing it and used Sheiner's proposal to allow relief.<sup>16</sup> The Court justified the burden shift by stating, "From a broader policy standpoint, defendants are better able to bear the cost of injury resulting from the manufacture of a better product ... because the risk of injury can be insured by the manufacturer and distributed among the public as a cost of doing business."<sup>17</sup> The Court held that a plaintiff could recover under a market share theory if: (1) all defendants have produced a drug from an identical formula; (2) the manufacturer of the injurious drug cannot be identified through no fault of the plaintiff; and (3) the named defendants in the action comprise a "substantial share"<sup>18</sup> of the relevant market.<sup>19</sup> Any defendant manufacturer may plead another manufacturer or attempt to exculpate itself completely if it can prove it was not the company that sold the injurious drug to the plaintiff.<sup>20</sup> However, in its analysis the California Court failed to adequately define the term "relevant market." This resulted in courts willing to adopt this theory applying different definitions. To date, only two states have chosen to follow California's application of market share liability, commonly referred to as "pure" market share li-

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ences; pregnancy complications, including ectopic (tubal) pregnancy and pre-term delivery; and infertility).

<sup>12</sup> Sheiner, *supra* note 6, at 995-1007.

<sup>13</sup> *Sindell*, *supra* note 1.

<sup>14</sup> *Id.* at 594.

<sup>15</sup> *Id.* at 594-595.

<sup>16</sup> B.E. Witkin, SIGNIFICANT DEVELOPMENTS IN CALIFORNIA SUBSTANTIVE LAW 1970-1990, 317-318 (B.E. Witkin ed., Bancroft Whitney Law Publishers) (1991).

<sup>17</sup> *Sindell*, *supra* note 1, at 611.

<sup>18</sup> *Murphy v. Squibb (E.R.) & Sons*, 40 Cal. 3d 672, 685 (1985) (holds ten percent of the national market of DES is too insignificant to support liability. Plaintiff's position that Squibb was alleged to be the second largest seller of DES, its ten percent market share must be deemed substantial. The Defendant's motion for judgment on the pleadings was affirmed).

<sup>19</sup> *Sindell*, *supra* note 1, at 611-613.

<sup>20</sup> *Id.*

ability: South Dakota and Texas.<sup>21</sup> Other jurisdictions have significantly modified the theory to reflect their own policy views.

### B. Forms of Alternative or Modified Market Share Liability

#### i. Wisconsin

In *Collins v. Eli Lilly Company*, the Wisconsin Supreme Court took the central tenets of the *Sindell* holding and added factors the jury could consider when assigning liability.<sup>22</sup> Some have referred to this incarnation as “risk contribution theory.”<sup>23</sup> In *Collins*, Roseann Collins was prescribed DES after being told it would prevent miscarriages.<sup>24</sup> Mrs. Collins diligently took DES throughout her pregnancy.<sup>25</sup> Mrs. Collins gave birth to a baby girl (the plaintiff) in 1958.<sup>26</sup> In 1975, the plaintiff began experiencing longer than normal menstrual periods accompanied by severe cramping.<sup>27</sup> Upon further physical examination, a visible lesion in the plaintiff’s vagina was discovered.<sup>28</sup> Studies concluded she was suffering from full cell cancer of the vagina.<sup>29</sup> Surgery was performed removing her uterus, part of her vagina, and a number of lymph nodes.<sup>30</sup>

The Wisconsin Supreme Court, like courts across the land, was faced with a very complex situation. DES had created an epidemic across the nation.<sup>31</sup> Here was a young woman, who, through no fault of her own,

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<sup>21</sup> *Sindell*, *supra* note 1, at 594-595; North Dakota under *McElhaney v. Eli Lilly & Company*, 564 F.Supp. 265 (1983); and Texas under *Hardy v. Johns-Mansville Sales Corporation*, 509 F.Supp. 1353 (1981).

<sup>22</sup> *Collins v. Eli Lilly Company*, 116 Wis. 2d 166, 200 (1984).

<sup>23</sup> Glen O. Robinson, Comment, *Multiple Causation in Tort Law: Reflections on the DES Cases*, 68 Va.L.Rev. 713 (1982) (A “risk contribution” theory is proposed by Robinson. Robinson argues that, from the standpoint of fairness in placing liability on the drug companies, “the critical point is the *creation of a risk* that society deems to be unreasonable, not whether anyone was injured by it.” Because all DES drug companies produced or marketed a “defective” product, Robinson contends, they all contributed to the risk of injury, even though they may not have contributed to the actual injury of a given plaintiff. Using this premise, Robinson argues that the plaintiff’s damages should be apportioned “among all defendants that created unreasonable risks according to the magnitude of the risks they created.”).

<sup>24</sup> *Collins*, *supra* note 22, at 174.

<sup>25</sup> *Id.*

<sup>26</sup> *Id.*

<sup>27</sup> *Id.*

<sup>28</sup> *Id.*

<sup>29</sup> *Id.*

<sup>30</sup> *Id.* at 174-175.

<sup>31</sup> Lawyers and Settlements, [http://www.lawyersandsettlements.com/articles/DES\\_Miscarriage\\_Cancer.html](http://www.lawyersandsettlements.com/articles/DES_Miscarriage_Cancer.html) (last visited Aug. 19, 2007).

had been ravaged by this unforgiving drug. The defendant asked the court to dismiss the case because the plaintiff failed to show they were the manufacturer who sold the DES pill to her mother.<sup>32</sup> The plaintiff sought a judicial determination on the theory of market share liability, citing *Sindell*.<sup>33</sup> The *Collins* court struggled with the evaluation of “actual market share” calling it “nearly impossible to determine” and “a waste of judicial resources” in attempting to do so.<sup>34</sup> The court fashioned an alternative basis for the calculation of liability based on the percentage of risk the plaintiff was exposed to by the defendant’s drug.<sup>35</sup>

The court stated that for a plaintiff to recover under a “risk contribution theory” they must show: (1) the plaintiff or plaintiff’s mother ingested DES; (2) DES was the cause of the injuries; (3) the defendant produced or marketed the type of DES ingested by plaintiff or plaintiff’s mother; and (4) the defendant’s conduct in producing or marketing DES constituted a breach of a legally recognized duty.<sup>36</sup> The court emphasized that the plaintiff did not need to show any evidence of the defendant’s geographic market share of the product.<sup>37</sup> If the plaintiff named only one manufacturer, that manufacturer would be liable for all damages.<sup>38</sup> However, if the plaintiff named multiple defendants, each defendant would only be liable for the percentage apportioned to it by the jury.<sup>39</sup> The court then charged the jury with a list of factors to consider when calculating the defendant’s percentage of liability.<sup>40</sup>

The *Collins* court has conducted the most thorough and exhaustive attempt at formulating a fair and non-capricious calculation of liability. The *Collins* factors have been accepted by many jurisdictions as the cen-

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<sup>32</sup> *Collins*, *supra* note 22, at 177-178.

<sup>33</sup> *Id.* at 177.

<sup>34</sup> *Id.* at 190.

<sup>35</sup> *Id.* at 191-192.

<sup>36</sup> *Id.* at 193.

<sup>37</sup> *Id.* at 194.

<sup>38</sup> *Id.*

<sup>39</sup> *Id.*

<sup>40</sup> *Id.* at 200. (“The factors are, but are not limited to: whether the drug company conducted tests on DES for safety and efficiency in use for pregnancies; to what degree the company took a role in gaining Food and Drug Administration approval of DES for use in pregnancies; whether the company had small or large market share in the relevant area; whether the company took the lead or merely followed the lead of others in marketing DES; whether the company issued warnings about the dangers of DES; whether the company produced or marketed DES after it knew or should have known of the possible hazards DES presented to the public; and whether the company took any affirmative steps to reduce risk of injury to the public.”).

tral starting point at which to address liability.<sup>41</sup> The court has formulated a comprehensive analytical process while overlooking a very large factor--profit margins.

ii. Washington/Florida/Massachusetts

Washington, Florida, and Massachusetts have largely chosen to follow the formula set out in *Collins* with only a few small variations. In *Martin v. Abbott Laboratories*, the Washington State Supreme Court considered the *Sindell* approach attractive, but was unclear on how to define "substantial share of the market," claiming that it distorts market share theory by holding a substantial share of the market liable for 100% of the plaintiff's injuries.<sup>42</sup> The Court adopted the factors laid out in *Collins* and allowed the plaintiff to sue only one defendant.<sup>43</sup> Named defendants were presumed to have captured an equal share of the "relevant market," which the defendant could rebut by impleading additional co-defendants.<sup>44</sup> Defendants could then exculpate themselves by proving that: (1) it did not produce the type of DES ingested by the mother; (2) it did not market DES in the particular geographic market; or (3) it did not market DES during the time period in question.<sup>45</sup> A defendant who could not exculpate itself became part of the plaintiff's "presumed market," which was presumed to have captured equal market share.<sup>46</sup> A defendant who was a part of the "relevant market" could provide evidence of a less-than-equal share of the market.<sup>47</sup> If a defendant successfully proved a lower share, the remaining defendants' shares were adjusted upward so that the total market equaled 100%.<sup>48</sup> The court stressed that "market" should be defined as narrowly as possible.<sup>49</sup> In *Conely v. Boyle Drug Company*, the Florida Supreme Court and in *Payton v. Abbott Laboratories*, the Massachusetts Supreme Court closely followed *Martin*, with only a minor initial hurdle for the plaintiff to show a genuine attempt to locate the actual manufacturer.<sup>50</sup>

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<sup>41</sup> *Martin v. Abbott Laboratories*, 102 Wash.2d 581, 605-606 (1984); *Conely v. Boyle Drug Company*, 570 So.2d 275, 284 (1990); and *Payton v. Abbott Laboratories*, 386 Mass. 540, 574-575 (1982).

<sup>42</sup> *Martin*, *supra* note 41, at 585.

<sup>43</sup> *Id.* at 604-605.

<sup>44</sup> *Id.* at 605.

<sup>45</sup> *Id.*

<sup>46</sup> *Id.* at 605-606.

<sup>47</sup> *Id.*

<sup>48</sup> *Id.*

<sup>49</sup> *Id.* at 606.

<sup>50</sup> *Conely*, *supra* note 41, at 284; *Payton*, *supra* note 41, at 574-575.

## iii. New York

In *Hymowitz v. Eli Lilly & Company*, the New York Court of Appeals addressed the adoption of a market share theory. There the court adopted a broad and liberal definition of "market."<sup>51</sup> Because of the difficulty of defining the term "market," the court felt the national market was the most reliable basis for liability.<sup>52</sup> In the jurisdiction of New York, the plaintiff was required to show: (1) DES was ingested and (2) injuries were sustained as a result.<sup>53</sup> Defendants could only exculpate themselves if they could prove they did not manufacture or market DES for pregnancy use, even if it appeared that the defendant did not cause the plaintiff's injuries.<sup>54</sup> Finally, the court held the defendants would be held severally liable for their national percentage, which could amount to less than 100% of the plaintiff's damages.<sup>55</sup> The court balanced the equitable trade-off between limited exculpability and several liability.<sup>56</sup> The New York Court later restricted their market share theory by refusing to extend causes of action to third generation plaintiffs whose grandmothers had consumed DES.<sup>57</sup>

## iv. Michigan

Michigan's Supreme Court took up the issue of this alternative style of liability in *Abel v. Eli Lilly & Company*. In *Abel*, the plaintiffs were daughters of a woman who had taken DES. The court fashioned its own variation of market share liability,<sup>58</sup> holding the method employed should be similar to *Martin*, except the plaintiff must make a genuine effort to identify the culpable defendant.<sup>59</sup> If at trial the court found the plaintiff did not conduct due diligence in its search, it could preclude the plaintiff from this style of DES-modified alternative liability.<sup>60</sup> Once the plaintiff conducted a good faith search for the manufacturer, he or she had to meet the elements established: (1) that all defendants distributed or manufactured one or more of the three drugs involved: DES, DSD, or dienestrol; (2) that the plaintiff's mother ingested DES, DSD, or dienestrol (not suf-

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<sup>51</sup> *Hymowitz v. Eli Lilly & Company*, 73 N.Y.2d 487, 509 (1989).

<sup>52</sup> *Id.*

<sup>53</sup> *Id.* at 512-513.

<sup>54</sup> *Id.* at 512.

<sup>55</sup> *Id.* at 513.

<sup>56</sup> *Id.* at 512-513.

<sup>57</sup> *Enright v. Eli Lilly & Company*, 77 N.Y.2d 377, 389 (1991).

<sup>58</sup> *Abel*, *supra* note 8, at 332-333.

<sup>59</sup> *Id.* at 332.

<sup>60</sup> *Id.*

ficient to state a synthetic estrogen); (3) that the plaintiff's mother ingested DES, DSD, dienestrol manufactured or distributed in Michigan; and (4) that DES, DSD and dienestrol each caused the type of injury which the plaintiffs complain.<sup>61</sup> Any defendants unable to exculpate themselves by showing they neither produced nor marketed the DES, DSD, or dienestrol would be held jointly and severally liable.<sup>62</sup> The court stated, *Abel* only advanced the theory of joint and several liability, helping to address the problems with DES injuries, and they did not want or intend to institute a new theory of "market share liability."<sup>63</sup> Within their new expanded analysis, a trial court's evaluation of whether the plaintiff conducted due diligence in the search for the manufacturer, a defendant's market share would impliedly be considered.

#### v. Hawaii

Only one state has been insightful enough to apply market share liability to a product other than DES.<sup>64</sup> In *Smith v. Cutter Biological, Inc., A Division of Miles Inc.*, a Hawaiian Court applied a modified version of market share liability to a case where the plaintiff was exposed to and contracted Human Immunodeficiency Virus ("HIV") from an infected blood source.<sup>65</sup> The Hawaiian Court used the national market model as stated in *Hymowitz*, imposing only several liability upon the defendants.<sup>66</sup> The Court stressed the plaintiff should use due diligence to join all manufacturers, but plaintiff's failure to do so would not be a defense.<sup>67</sup> Defendants were also permitted to implead other defendants.<sup>68</sup> If a defendant could prove they had no product on the market at the time of the plaintiff's injury, they would be exculpated.<sup>69</sup> Defendants who could not exculpate themselves became part of the plaintiff's "presumed market," which was presumed to have an equal market share.<sup>70</sup> A defendant who was a part of the "relevant market" could provide evidence of a less-than-equal share.<sup>71</sup>

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<sup>61</sup> *Id.* at 333.

<sup>62</sup> *Id.* at 331.

<sup>63</sup> *Id.*

<sup>64</sup> *Smith*, *supra* note 4.

<sup>65</sup> *Id.* at 421-422.

<sup>66</sup> *Id.* at 438.

<sup>67</sup> *Id.* at 437-438.

<sup>68</sup> *Id.*

<sup>69</sup> *Id.*

<sup>70</sup> *Id.*

<sup>71</sup> *Id.* at 438-439.

## vi. New Jersey/Kansas

Other jurisdictions, such as New Jersey and Kansas, have not ruled out adopting some form of market share liability, but will do so only if the right factual scenario presents itself.<sup>72</sup>

*C. Jurisdictions That Fail to Recognize or That Limit Market Share Liability*

Many jurisdictions have failed to follow California's notion of alternative liability, shifting the burden of causation to the defendant.<sup>73</sup> These courts have stated that the burden shift is too great a deviation from established tort principals and a change in traditional tort law should be left to the legislature.<sup>74</sup> The Louisiana Courts in particular have highlighted both the legislature's opportunity and refusal to adopt this tort burden shift theory.<sup>75</sup> Other states' courts have based their denials on the public policy grounds of the potential chilling effect it would have on some of the states' desirable public goals.<sup>76</sup> The New Jersey Court in *Shackil v. Lederle Laboratories* refused to apply market share liability against a manufacturer of diphtheria-pertussis-tetanus vaccine.<sup>77</sup> The court was concerned about the effect it would have.<sup>78</sup> Shifting the burden to defendants to exculpate themselves would retard the vaccine market, cut against societal goals of maintaining an adequate supply of life-saving vaccines, and stifle further research and development.<sup>79</sup>

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<sup>72</sup> *Shackil v. Lederle Laboratories*, 116 N.J. 155, 191 (1989).

<sup>73</sup> *Doyle Baker et al.*, American Law Reports, 63 ALR5th 195, §4[b] (1998); *Nutt v. A.C. & S. Co., Inc.*, 466 A.2d 18 (1986); *Smith v. Eli Lilly & Company*, 137 Ill.2d 222 (1990); *Mulcahy v. Eli Lilly & Company*, 386 N.W.2d 67 (1986); *Starling v. Seaboard Coast Lines R. Co.*, 533 F.Supp. 183 (1982); *Thompson v. Johns-Manville Sales Corp.*, 714 F.2d 581 (1983); *Zaft v. Eli Lilly & Company*, 676 S.W.2d 246 (1984); *Kurcz v. Eli Lilly & Company*, 113 F.3d 1426 (1997); *Sutowski v. Eli Lilly & Company*, 696 N.E.2d 187 (1998); *Case v. Fiberboard Corp.*, 743 P.2d 1062 (1987); *Senn v. Merrell-Dow Pharmaceuticals Inc.*, 751 P.2d 215 (1988); *Tidler v. Eli Lilly & Company*, 851 F.2d 418 (1988); *Griffin v. Tenneco v. Resins, Inc.*, 648 F.Supp 964 (1986); *City of Philadelphia v. Lead Industries Association, Inc.*, 994 F.2d 112 (1993); *Mizell v. Eli Lilly & Company*, 526 F.Supp 589 (1981); and *Gorman v. Abbott Laboratories*, 599 A.2d 1364 (1991).

<sup>74</sup> *Id.*

<sup>75</sup> *Doyle*, *supra* note 73, at 228; *Jefferson v. Lead Industries Association, Inc.*, 106 F.3d 1245 (1997).

<sup>76</sup> *Id.*

<sup>77</sup> *Shackil*, *supra* note 72, at 159.

<sup>78</sup> *Doyle*, *supra* note 73, at 228; *Shackil*, *supra* note 77, at 190-191.

<sup>79</sup> *Shackil*, *supra* note 77, at 190.

*D. Jurisdictions That Have Neither Accepted Nor Rejected  
Market Share Liability*

To this day, many states have yet to address the issue of market share liability.<sup>80</sup> Federal courts in states yet to adopt market share have declined to do so citing the Erie Doctrine.<sup>81</sup> As states address whether or in what form of market share liability to adopt, they should strongly consider adopting a modified version of the *Collins* rule.<sup>82</sup> Courts have been hesitant to extend market share liability beyond DES because they have yet to find a product similar enough in its chemical formulation to justify industry-wide liability.<sup>83</sup> Courts have not had the opportunity to examine market share liability's application to agricultural pesticides; if they do they might find an alternative theory of liability might be the only avenue of redress.

III. EXTENDED APPLICATION OF MARKET SHARE LIABILITY TO  
AGRICULTURAL PESTICIDES

The use and application of agricultural pesticides is a setting in which market share liability should be applied. In the United States pesticides are used on over 900,000 farms<sup>84</sup> and with urban life extending further than ever into our nation's farmland, a greater number of people,<sup>85</sup>

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<sup>80</sup> Alabama; Alaska; Arkansas; Colorado; Connecticut; Maine; Mississippi; Montana; Nebraska; Nevada; New Mexico; North Dakota; Tennessee (no definitive ruling on Market Share Liability, but have rejected other forms of "enterprise liability"); Utah; Vermont; Virginia; West Virginia; and Wyoming.

<sup>81</sup> *Erie Railroad v. Tompkins*, 304 U.S. 64 (1938).

<sup>82</sup> *Collins*, *supra* note 22, at 200-201.

<sup>83</sup> *Ferris v. Gatke Corp.* 107 Cal.App.4th 1211, 1221-1222 (2003); *Mullen v. Armstrong World Industries, Inc.* 200 Cal.App.3d 250, 255-256 (1988). ("DES was produced by hundreds of companies pursuant to one formula. As a result, all DES had identical physical properties and chemical compositions and, consequently, all DES prescribed to pregnant women created the same risk of harm.... Asbestos products, on the other hand, have widely divergent toxicities ... caused by a combination of factors, including: the specific type of asbestos fiber incorporated into the product; the physical properties of the product itself; and the percentage of asbestos used in the product. There are six different asbestos silicates used in industrial applications and each presents a distinct degree of toxicity in accordance with the shape and aerodynamics of the individual fibers. Further, it has been established that the geographical origin of the mineral can affect the substance's harmful effects.").

<sup>84</sup> The University of Georgia College of Agricultural and Environmental Sciences, <http://pubs.caes.uga.edu/caespubs/pubcd/B1121.htm> (last visited Aug. 19, 2007).

<sup>85</sup> *Holt v. Department of Food & Agriculture*, 171 Cal.App.3d 427, (1985) (An aerial crop duster was found guilty of violating federal law when he negligently and carelessly

through spray drift<sup>86</sup> and contaminated ground water,<sup>87</sup> are being exposed to agricultural pesticides. These pesticides are designed to harm or kill pests,<sup>88</sup> but because many pests have similar biological systems as humans, exposure could cause catastrophic injuries similar to the cancer caused by DES.<sup>89</sup> The National Cancer Institute has stated that “exposure to certain agricultural pesticides may be associated with an increased risk of prostate cancer.”<sup>90</sup> Such exposure may occur through point or non-point pollution.<sup>91</sup> Pesticide spray drift can expose people and property downwind,<sup>92</sup> making the application of the chemical unpredictable. In 2002, more than 58,000 unintentional poisonings from the use of agricultural pesticides were reported to the American Association of Poison Control Centers.<sup>93</sup> To assist in tracking pesticide use, some states have implemented a reporting process that records the date, location, type of pesticides used, and amounts applied.<sup>94</sup> Tracking is done in hopes of reducing exposure and injury to the public.<sup>95</sup> Injuries may lay dormant for years, rendering a future plaintiff unable to prove when they were exposed and to which manufacturer’s chemical, similar to the DES plaintiffs. Despite these dangers, pesticides are vital and necessary in farming since they allow for a larger yield per acre.<sup>96</sup> Without pesticides, the United States’ food production would drop and food prices would soar.<sup>97</sup>

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sprayed deadly agricultural pesticides beyond the boundaries of a rice field onto three county workers 187 feet outside of the field).

<sup>86</sup> United States Environmental Protection Agency, <http://www.epa.gov/pesticides/factsheets/spraydrift.htm> (last visited Sep. 28, 2007).

<sup>87</sup> United States Environmental Protection Agency, <http://www.epa.gov/owow/nps/facts/point6.htm> (last visited Sep. 28, 2007).

<sup>88</sup> United States Environmental Protection Agency, <http://www.epa.gov/oecaagct/tpes.html#Hazards/Safe%20Use> (last visited Sep. 28, 2007).

<sup>89</sup> National Cancer Institute, <http://www.cancer.gov/newscenter/pressreleases/AgricultureHealthStudy> (last visited Sep. 28, 2007).

<sup>90</sup> *Id.*

<sup>91</sup> United States Environmental Protection Agency, <http://www.epa.gov/oecaagct/tpes.html> (last visited Sep. 28, 2007).

<sup>92</sup> United States Environmental Protection Agency, <http://www.epa.gov/pesticides/factsheets/spraydrift.htm> (last visited Sep. 28, 2007).

<sup>93</sup> International Journal of Agricultural Sustainability, [http://www.leopold.iastate.edu/pubs/staff/files/externalcosts\\_IJAS2004.pdf](http://www.leopold.iastate.edu/pubs/staff/files/externalcosts_IJAS2004.pdf) (last visited Sep. 28, 2007).

<sup>94</sup> Identifying and Tracking Pesticide Use in Agriculture, <http://www.esri.com/news/arcuser/0702/pesticide.html> (last visited Sep. 28, 2007).

<sup>95</sup> *Id.*

<sup>96</sup> The University of Georgia College of Agricultural and Environmental Sciences, <http://pubs.caes.uga.edu/caespubs/pubcd/B1121.htm> (last visited Aug. 19, 2007).

<sup>97</sup> *Id.*

Courts have been concerned about applying a market share liability theory to products that fail to have the same or similar molecular composition.<sup>98</sup> Through the agricultural industry's use of "me-too"<sup>99</sup> pesticide registration, this concern is alleviated. The "me-too" registration option allows manufacturers to register and produce agricultural pesticides with the same or similar molecular composition without going through the full registration process.<sup>100</sup> This identical formulation is likely to leave the ability to identify the actual manufacturer nearly impossible. Couple an unknown defendant-manufacturer with patent protection<sup>101</sup> and defendants using identical or "substantially similar" pesticide formulations,<sup>102</sup> market share liability theory may be the only means of recovery.

#### IV. PROFIT MARGINS ARE ESSENTIAL FOR ACCURACY AND FAIRNESS IN THE CALCULATIONS OF LIABILITY

##### *A. Refocusing Market Share Liability by Including a Profit Share Factoring Component*

This Comment proposes that a jury should be allowed to consider each defendant's profit margins (gained or lost) from the product in question and have the ability to adjust liability accordingly.<sup>103</sup> In her note, "*DES*

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<sup>98</sup> Ferris, *supra* note 83, at 1222.

<sup>99</sup> GLOSSARY OF SELECTED TERMS, ABBREVIATIONS AND ACRONYMS USED IN THE OFFICE OF PESTICIDE PROGRAMS, <http://ceris.purdue.edu/info/bluebook/glossary.txt> (last visited Dec. 6, 2007). ("ME-TOO" PRODUCT - An application for registration of a pesticide product that is substantially similar or identical in its uses and formulation to products that are currently registered.')

<sup>100</sup> *Id.*

<sup>101</sup> 40 C.F.R. §152.113(c).

<sup>102</sup> *Id.*

<sup>103</sup> Suggested Jury Instructions Based on the Collins Analysis as Modified by Profit Share Factoring.

##### Alternative Causation

You may decide that more than one of the defendants was negligent, but that the negligence of only one of them could have actually caused [name of plaintiff]'s harm. If [name of plaintiff] cannot prove which manufacturer's product he/she was exposed to, [name of defendant] will have the burden to show that it was not their product which harmed [name of plaintiff].

[Name of plaintiff] must show a genuine effort to locate the actual manufacturer. If you cannot decide which defendant caused [name of plaintiff]'s harm, you must decide to what extent each defendant is responsible for [name of plaintiff]'s harm. You can base your decision on many factors. Those factors are, but not limited to the following:

- 1 - The extent [name of defendant] conducted tests on the product to ensure safety;

And a Proposed Theory of Enterprise Liability,” Sheiner asked the court to focus on the party that could best afford to bear the burden of the financial injury suffered by the plaintiff.<sup>104</sup> She proposed the defendant that is in the best position to reimburse the plaintiff, was the leader of the market.<sup>105</sup> Although her proposal asked the courts to base liability on each defendant’s percent of sales, it appears the intent behind the request was to attach the highest percent of liability to the defendant who made the most money from that product.<sup>106</sup> Courts have interpreted this to mean the defendant with greatest market share. In the context of the DES drug, this distinction between profit share and market share was not needed because the DES was never patented, thus manufacturers never had an initial period of higher profits.<sup>107</sup> In that scenario, profit margins did equate with market share.

Unfortunately, when articulating factors in calculating liability, the courts have not mentioned profit margins. They have focused on defining the term “market,” assuming that profit margins were synonymous with market share. Where the drug, chemical, or pesticide in question is under an initial patent period, this paradigm does not generally hold true. A manufacturer collecting large profits during the initial patent period may subsequently lose market share to the generic market.<sup>108</sup> A generic manufacturer capturing a majority of the market share may then only collect a fraction of the overall profits of that drug or chemical caused by

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- 2 – The degree that [name of defendant] took a role in gaining federal regulatory approval;
  - 3 – Whether [name of defendant] had small or large market share in a relevant market;
  - 4 – Whether [name of defendant] took the lead or merely followed the lead of others in marketing;
  - 5 – Whether [name of defendant] issued warnings;
  - 6 – Whether [name of defendant] produced or marketed the drug after it knew or should have known of possible hazards;
  - 7 – Whether [name of defendant] took any affirmative steps to reduce the risk of injury; and
  - 8 – The profit levels gained by [name of defendant] from the product that injured [name of plaintiff].

However, if a defendant proves that [he/she/it] did not cause [name of plaintiff]’s harm, then you must conclude that a defendant is not responsible.

<sup>104</sup> Sheiner, *supra* note 6, at 995-1007.

<sup>105</sup> *Id.*

<sup>106</sup> *Id.*

<sup>107</sup> Center For Disease Control, <http://www.cdc.gov/des/hcp/nurses/history.html> (last visited Sep. 28, 2007).

<sup>108</sup> Federal Trade Commission, <http://www.ftc.gov/os/2002/07/genericdrugstudy.pdf> (last visited Sep. 24, 2007).

the reduced price of the competitive market place.<sup>109</sup> Many courts would apply liability based on their definition of “market,” potentially holding the generic manufacturer liable for a higher percentage than the manufacturer who made superior profits, contradicting the original intent behind the theory. The market percentage, however the court wishes to define it, should be used as a baseline of liability, allowing for a potential adjustment up or down according to their profits gained from that product. A defendant would have the opportunity to show that its liability should be lowered because it only garnered a smaller level of profits. A defendant could provide evidence of another defendant’s higher profit margins, justifying an upward adjustment; or the plaintiff could dispute the market liability set by the court and seek to adjust a defendant’s liability based on their high profits derived from the injurious product. This process better achieves the intent of the original theory of market share by focusing on the party who can best absorb and afford to pay for the plaintiff’s injury: the defendant who made the most profit from that product.<sup>110</sup>

Agricultural pesticide patents can be financially lucrative and are therefore extremely valuable to the patent holder.<sup>111</sup> The pesticide market is valued at twenty-seven billion dollars annually and the United States ranks first in the global market share, selling thirty-three percent of the world’s pesticides.<sup>112</sup> While the pesticide industry is dominated by approximately fifteen manufacturers, it is estimated that ten of these companies produce ninety percent of the world’s active ingredients.<sup>113</sup> Many of these manufacturers are also involved with the production of pharmaceuticals, animal health, nutrition, and consumer health and industrial chemicals.<sup>114</sup> The Center for Disease Control (“CDC”) estimates that it could cost upwards of fifty million dollars to develop and register a new pesticide with the Environmental Protection Agency (“EPA”) and that several years of the patent life will elapse before costs are recouped and

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<sup>109</sup> *Id.*

<sup>110</sup> Sheiner, *supra* note 6, at 1001.

<sup>111</sup> Purdue News, <http://www.purdue.edu/UNS/html4ever/010910.Bennett.Dupont.html> (last visited Sep. 28, 2007). (“DuPont has donated more than thirty US and foreign patents for two agricultural insecticides to the Purdue Research Foundation.... The full value for the patent portfolio cannot yet be accurately assessed because future uses of the products have yet to be determined.”).

<sup>112</sup> Agricultural and Agri-Food Canada, [http://www.agr.gc.ca/pol/index\\_e.php?s1=pub&s2=pesticide&page=pest1](http://www.agr.gc.ca/pol/index_e.php?s1=pub&s2=pesticide&page=pest1) (last visited Sep. 28, 2007).

<sup>113</sup> *Id.*

<sup>114</sup> *Id.*

profits start to accrue.<sup>115</sup> The average exclusive use of a pesticide is ten years, and if a patent holder can show the EPA nine minor uses (for crops less than 300 acres), the EPA will extend the patent three additional years.<sup>116</sup> After the thirteen years pass, generic companies have the opportunity to enter the market. For chemical pesticides, post-patent competition can produce a twenty to fifty percent price reduction, with only a ten to twenty percent generic market intrusion.<sup>117</sup> This drastically lowers the price for farmers, shifting profits away from the patent holder.<sup>118</sup>

Because the agricultural pesticides industry is extremely lucrative and pesticides are susceptible to an initial patent period,<sup>119</sup> they would be an appropriate product for which to apply a profit share factoring analysis.

#### V. MARKET SHARE LIABILITY WITH PROFIT SHARE FACTORING WOULD ALLEVIATE PUBLIC POLICY CONCERNS

Many of the states with significant agricultural exposure have yet to adopt a market share theory of liability.<sup>120</sup> Some states have rejected the application and cited a potential reduction, or chilling affect, on the production of certain necessary products.<sup>121</sup> In *Shackil*, the court specifically rejected applying market share liability to a vaccine manufacturer because it believed application would cause a halt in production, weakening the public's health.<sup>122</sup> The court feared the unlimited liability imposed by market share liability would frustrate the use and future development of needed drugs.<sup>123</sup> Though the court denied the application of market share liability, it clearly confined its decision to vaccinations, leaving open an application where the public policy goals sought to be furthered could nevertheless be achieved.<sup>124</sup>

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<sup>115</sup> Centers for Disease Control and Prevention, <http://www.cdc.gov/ncidod/eid/vol7no1/rose.htm> (last visited Aug. 19, 2007).

<sup>116</sup> Summaries of Environmental Law Administered by the EPA, <http://www.nceonline.org/NLE/CRSreports/BriefingBooks/Laws/l.cfm> (last visited Aug. 19, 2007).

<sup>117</sup> Farm Foundation, <http://www.farmfoundation.org/Issue%20Reports/documents/August2005ISSUEREPORFINAL.pdf> (last visit Aug. 19, 2007).

<sup>118</sup> *Id.*

<sup>119</sup> Common Patent Question, <http://www.uspto.gov/smallbusiness/patents/faq.html#1> (last visited Sep. 24, 2007).

<sup>120</sup> Alabama; Arkansas; Colorado; Nebraska; New Mexico; North Dakota; Tennessee (no definitive ruling on Market Share Liability but have rejected other forms of "enterprise liability"); Utah; Virginia; West Virginia; and Wyoming.

<sup>121</sup> *Shackil*, *supra* note 72, at 158.

<sup>122</sup> *Id.*

<sup>123</sup> *Id.* at 178-180.

<sup>124</sup> *Id.* at 191.

Market share liability with profit share factoring could be applied to agricultural pesticide cases without aggravating the public policy worries in *Shackil*.<sup>125</sup> The *Shackil* court specifically pointed to potential price increases, potential decline in the numbers of producers, and the interruption of the products' supply.<sup>126</sup> Liability under a profit share analysis would not result in a chilling effect on manufacturer's production because it allows for a better understanding and prediction of liability for a product. Knowing that a product's profitability would be considered, a manufacturer would no longer fear the mechanical liability set by a "pure" market share calculation. Because the profit sharing tool would be available to all parties involved, both plaintiffs and defendants, manufacturers of generic versions would not fear the potential imbalance of liability based on units sold, and would continue to supply the needed product. Patent holding companies would not be penalized for profit gained during their patent exclusive period and would be fully credited for their research and development expenditures.

Giving companies more information on how their products will be judged eliminates concerns of a chilling effect on an industry. Market share liability with profit share factoring would not only quell fears of the unknown, but it would help the court reach a more justified distribution of liability, all-the-while giving citizens and farm workers an avenue to redress their injuries.

#### VI. HYPOTHETICAL APPLICATION OF MARKET SHARE LIABILITY MODIFIED WITH PROFIT SHARE FACTORING IN AN AGRICULTURAL SETTING

When attempting to illustrate the potential impact of a market share liability regime with profit share factoring enhancement in an agricultural setting, the facts and statistics one would highlight in previous decisions are not available. Even where market share liability has been applied, profit margins are not and have not been at issue, and thus the courts' analytical processes have not included any reference to them. Any request for such information by the parties would have been denied on the grounds of relevancy.<sup>127</sup>

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<sup>125</sup> *Id.*

<sup>126</sup> *Id.* at 179.

<sup>127</sup> John W. Strong et al., McCormick on Evidence, Fifth Edition 276 (John W. Strong ed., West Publishing Co. 1999) ("There are two components to relevant evidence: materiality and probative value. ...If the evidence is offered to help prove a proposition that is not a matter in issue, the evidence is immaterial. What is "in issue," that is, within the range of the litigated controversy, is determined mainly by pleadings, reading the light of

The following hypothetical is based on a fictitious factual scenario. It will apply the analytical process articulated by the *Sindell* and *Collins* courts, enhanced with profit share factoring.<sup>128</sup> The *Collins* decision utilized the most thorough and exhaustive attempt at formulating a fair and non-capricious calculation of liability. By including a simple, but pivotal factor of profit share factoring, we can better attain the goal of apportioning fair and just liability. This hypothetical will illustrate how the jury would have apportioned liability, with and without a profit share factoring component.

#### Common Factual Situation<sup>129</sup>

In 1957, Roseann Collins became pregnant with Therese Collins, the plaintiff in this case. Because Roseann Collins was having problems with spotting in the early stages of her pregnancy, she consulted her physician. She was told that Blorobenzinate, a common agricultural pesticide, was known to have caused similar symptoms. Mrs. Collins lived and worked in agricultural settings, moving from location to location her entire life. She had been exposed to pesticides through drift spray, pesticide particles attaching to fog, and inaccurate crop dusting. She could not be certain when, where, and whose Blorobenzinate<sup>130</sup> she had been exposed to.

In 1975, the plaintiff began to experience longer than normal menstrual periods accompanied by severe cramping. Later that year Roseann Collins took the plaintiff to consult her physician. After examinations, it was concluded the plaintiff was suffering from full cell cancer of the vagina. It was determined to a medical certainty that Blorobenzinate was the cause of the plaintiff's injuries.

For the plaintiff to recover she would be required to show: (1) the plaintiff or plaintiff's mother ingested Blorobenzinate, (2) Blorobenzinate was the cause of the injuries, (3) the defendant produced or mar-

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the rules of pleading and controlled by the substantive law.”). Federal Rules of Evidence, Definition of “Relevant Evidence” § 401, (2006) (“[r]elevant evidence” means evidence having any tendency to make the existence of any fact that is of consequence to the determination of the action more probable or less probable that it would be without the evidence.”). Federal Rules of Evidence, Relevant Evidence Generally Admissible; Irrelevant Evidence Inadmissible §402, (2006) (“[a]ll relevant evidence is admissible except as otherwise provided....Evidence which is not relevant is not admissible.”).

<sup>128</sup> Collins, *supra* note 22, at 200-201.

<sup>129</sup> The hypothetical revenue and liability statistics are purely speculative and are used for illustrative purposes only.

<sup>130</sup> Blorobenzinate is a purely hypothetical chemical. Any likeness to an existing chemical is coincidental.

keted the type of Blorobenzinate ingested by plaintiff or plaintiff's mother, and (4) the defendant's conduct in producing or marketing Blorobenzinate constituted a breach of a legally recognized duty. The jury may apportion liability based on, but are not limited to, the following factors: whether the drug manufacturer conducted tests on the drug for safety and efficiency; the degree to which the manufacturer took a role in gaining Food and Drug Administration approval; whether the manufacturer had small or large market share in a relevant area; whether the manufacturer took the lead or merely followed the lead of others in marketing; whether the manufacturer issued warnings; whether the manufacturer produced or marketed the drug after it knew or should have known of possible hazards; whether the manufacturer took any affirmative steps to reduce risk of injury; and profit-share factoring. Unlike California, which imposes liability based on a mechanical assessment of the defendant's market share,<sup>131</sup> adding a profit share factoring component enhances the jury's ability to evenly administer a fair outcome.

In 1977, the plaintiff filed suit against three pesticide companies that produced or marketed Blorobenzinate. The plaintiff has claimed ten million dollars in damages, which includes medical bills, pain and suffering, and any future limitations caused by her injuries.

#### Scenario 1 – Patent Holder Profiteering

The first defendant is Eli Lilly Company ("Lilly"). Lilly was the patent holder on the Blorobenzinate pesticide for the years 1945 thru 1955. Lilly spent forty-five million dollars researching and developing Blorobenzinate. While Lilly held the patent on Blorobenzinate they charged approximately ten dollars per pound and profited fifty-five million dollars, taking in over one hundred million dollars in gross sales revenue in that time period. During the patent period from 1945 to 1955, Lilly garnered one hundred percent of the Blorobenzinate market share. When the patent expired, defendants Vale Chemical ("Vale") and Carnrick Laboratories ("Carnrick") began manufacturing a generic form of Blorobenzinate. All three defendants knew Blorobenzinate had the potential to cause birth defects and disregarded its possible effects on the public. Benefiting from Lilly's research and development, Vale and Carnrick spent approximately eight million dollars each in production costs. Because the Blorobenzinate formula was no longer under patent and more manufacturers were producing the drug, the per-pound price fell to fifty cents. Due to their superior advertising and marketing, Vale and Carn-

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<sup>131</sup> Sindell, *supra* note 1.

rick managed to each capture forty-five percent of the relevant market, leaving only ten percent for Lilly in the post patent-era. Although Vale and Carnrick each captured forty-five percent, because the per-pound price dropped they made ten million dollars profit each.

Here the plaintiff would be able to show: (1) in 1957 the plaintiff's mother ingested Blorobenzinate; (2) it was determined to a medical certainty that Blorobenzinate was the cause of the plaintiff's injuries; (3) all three defendants were producing Blorobenzinate in 1957 when the plaintiff's mother was exposed; and (4) all three defendants were aware of the dangers of Blorobenzinate and continued marketing the drug without warning its customers.

In a bifurcated proceeding, the jury would find all three defendants liable for one hundred percent of the plaintiff's injuries. In the second stage of the proceedings, the jury would be charged with allocating the appropriate percentage of liability per defendant. The court would give the jury many factors to base their decision upon, including profit share factoring.

Following a pure calculation of a market share liability, as used in California, Lilly would be liable for ten percent of the plaintiff's injuries. This would equal one million dollars because they controlled ten percent of the relevant market at the time the plaintiff's mother ingested Blorobenzinate. The ten percent or one million dollars would be the equivalent of 1.8% of Lilly's profits derived from their sales. Defendants Vale and Carnrick would each be liable for forty-five percent of the plaintiff's injuries, equaling four million five hundred thousand dollars apiece. The forty-five percent or four million five hundred thousand dollars would be the equivalent of forty-five percent of Vale's and Carnrick's profits derived from the sales of their Blorobenzinate pesticides.

If the jury were to apply the *Collins* analysis with an additional step of profit share factoring, they would have more flexibility in administering justice. Under profit share factoring, profit margins are now relevant to the proceedings and thus eligible for discovery. Either the plaintiff or a co-defendant could request financial documents relating to profit margins on the drug in question in hopes of showing an inequity.

Here, the large apportionment of liability to Vale and Carnrick could render them insolvent, thus judgment proof, and leaving the plaintiff only ten percent of damages recoverable from Lilly. The plaintiff could then request the jury to take notice of Lilly's large profit margins and ask for their liability to be adjusted accordingly. If the jury did adjust Lilly's liability, it would reduce the remaining balance of award owed the plaintiff, directly affecting the two remaining defendants.

Here, the jury would take exception to the large profits Lilly gained and adjust its liability up to seventy-five percent of plaintiff's damages,

equaling seven million five hundred thousand dollars. The seven million five hundred thousand dollars now owed by Lilly equals approximately 13.6% of profits, decreasing their profits from the sale of Blorobenzinate from fifty-five million dollars to forty-seven million five hundred thousand dollars. That would leave twenty-five percent or two million five hundred thousand dollars in damages to be split two ways between Vale and Carnrick. Vale and Carnrick's liability is reduced to 12.5% or one million two hundred fifty thousand dollars each. The one million two hundred fifty thousand dollars now owed by Vale and Carnrick equals 12.5% of their profits. Decreasing their profits from ten million dollars to eight million seven hundred fifty thousand dollars. This reallocation of liability is more in-line with Sheiner's original intent of placing the financial burden on the party who can best absorb the cost.<sup>132</sup>

	Profits Gained	% of Liability Under "Pure" Market Share	Amount of Damages Owed	% of Liability Under Profit Share Factoring	Amount of Damages Owed
Lilly	\$55,000,000	10%	\$1,000,000	75%	\$7,500,000
Vale	\$10,000,000	45%	\$4,500,000	12.5%	\$1,250,000
Carnrick	\$10,000,000	45%	\$4,500,000	12.5%	\$1,250,000

### Scenario 2 – Backside Profiting

The first defendant, Lilly, was the patent holder on the Blorobenzinate pesticide for the years 1945 thru 1955. Lilly spent forty-five million dollars researching and developing Blorobenzinate and their patent expired on December 31, 1955. While Lilly held the patent on Blorobenzinate, they charged approximately ten dollars per pound and failed to turn a profit, taking in forty million dollars in that time period. During the patent period from 1945 to 1955, Lilly garnered one hundred percent of the Blorobenzinate market share. After Lilly's patent period was over, Defendants, Vale and Carnrick began manufacturing a generic form of Blorobenzinate. All three Defendants knew Blorobenzinate had the potential to cause birth defects and disregarded its possible effects. Benefiting from Lilly's research and development, Vale and Carnrick spent only two million dollars each in production costs. Because the Blorobenzinate formula was no longer under patent and more manufacturers were producing the drug, the per-pound price fell to fifty cents. Due to Lilly's advertising and name brand recognition it managed to retain eighty percent of the relevant market, leaving only twenty percent for Vale and Carnrick in the post patent era. Although Lilly retained a substantial

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<sup>132</sup> Sheiner, *supra* note 6, at 1001.

percent of the market, eighty percent, various factors limited them to one million dollars in profits. Because Vale and Carnrick did not have the financial burden of researching and developing Blorobenzinate, they were able to focus on production and marketing, allowing them to make six million dollars each.

Here the plaintiff would be required to show: (1) in 1957 the plaintiff's mother ingested Blorobenzinate; (2) it was determined to a medical certainty that Blorobenzinate was the cause of the plaintiff's injuries; (3) all three defendants were producing Blorobenzinate in 1957 when the plaintiff's mother was exposed; and (4) all three defendants were aware of the dangers of Blorobenzinate and continued marketing the pesticide without warning its customers.

In a bifurcated proceeding, the jury found all three defendants liable for one hundred percent of the plaintiff's injuries. In the second stage of the proceedings the jury is now charged with allocating the appropriate percentage of liability per defendant. The court has given the jury many factors in which to base its decision, one of which is profit share factoring.

Following a pure calculation of market share liability, as used in California, Lilly would be liable for eighty percent of the plaintiff's injuries. This would equal eight million dollars because they controlled eighty percent of the relevant market at the time the plaintiff's mother ingested Blorobenzinate. The eighty percent or eight million dollars would be the equivalent of negative eight hundred percent of Lilly's profits derived from their sales. This would most likely render them insolvent, leaving the plaintiff with only twenty percent of recovery. Defendants Vale and Carnrick both would be liable for twenty percent of the plaintiff's injuries, equaling one million dollars each. The twenty percent, or one million dollars, would be the equivalent of 16.7% of Vale's and Carnrick's profits derived from their Blorobenzinate pesticide sales.

If the jury were to apply the *Collins* analysis with an additional step of profit share factoring they would have more flexibility in administering justice. Under a profit share factoring, profit margins are now relevant to the proceedings and thus eligible for discovery. Either the plaintiff or a co-defendant could request financial documents relating to profit margins on the drug in question in order to show inequity.

Here the large apportionment of liability to Lilly could render them insolvent thus judgment proof. This could leave the plaintiff with only twenty percent of recovery from Vale and Carnrick. The plaintiff could request the jury to take notice of Vale and Carnrick's large profit margins and ask for their liability to be adjusted accordingly. If the jury were to adjust Vale and Carnrick's liability it would reduce the remaining balance of award owed the plaintiff, directly affecting Lilly.

Here the jury took exception to the large profits Vale and Carnrick gained and adjusted their liability up to ninety-two percent of plaintiff's damages, equaling nine million two hundred thousand dollars. The four million six hundred thousand dollars now each owed by Vale and Carnrick equals seventy-seven percent of their profits gained, decreasing their Blorobenzinate profits from six million dollars to one million four hundred thousand dollars. That leaves eight percent or eight hundred thousand dollars of the plaintiff's damages to be paid by Lilly. The eight percent or eight hundred thousand dollars would equal eighty percent of profits gained, decreasing their profits from one million dollars to two hundred thousand dollars. This reallocation of liability is more in-line with Sheiner's original intent of placing the financial burden on the party who can best absorb the cost.<sup>133</sup>

	Profits Gained	% of Liability Under "Pure" Market Share	Amount of Damages Owed	% of Liability Under Profit Share Factoring	Amount of Damages Owed
Lilly	\$1,000,000	80%	\$8,000,000	8%	\$800,000
Vale	\$6,000,000	10%	\$1,000,000	46%	\$4,600,000
Carnrick	\$6,000,000	10%	\$1,000,000	46%	\$4,600,000

The scenarios described above are just two possible settings on an infinite spectrum of possibilities. The goal of profit share factoring is to give the trier of fact an additional tool by which to administer justice. Profit share factoring forces the court and the trier of fact to focus on the original intent behind a market share theory of liability: "who can best absorb the damage inflicted upon an innocent plaintiff?"<sup>134</sup>

A reckless adoption of market share liability would have an extremely negative impact on agricultural production. A court or a state legislature in one of these states<sup>135</sup> should not refuse to adopt market share liability, but adopt an enhanced version, which would include a profit share factoring element. "We all benefit from farm chemicals and therefore we all have a responsibility to ensure that these benefits are maximized, while any adverse effects are minimized."<sup>136</sup> Adding a profit share factoring analysis would treat each manufacturer more fairly than a pure

<sup>133</sup> *Id.*

<sup>134</sup> *Id.*

<sup>135</sup> Alabama; Alaska; Arkansas; Colorado; Connecticut; Maine; Mississippi; Montana; Nebraska; Nevada; New Mexico; North Dakota; Tennessee (no definitive ruling on Market Share Liability but have rejected other forms of "enterprise liability"); Utah; Vermont; Virginia; West Virginia; and Wyoming.

<sup>136</sup> Regional Institute Limited – Pesticides in Agriculture, <http://www.regional.org.au/au/roc/1992/roc1992031.htm> (last visited Sep. 28, 2007).

market share calculation. This would also prevent the chilling effect on the industry feared by the *Shackil* Court,<sup>137</sup> allowing manufacturers to continue providing necessary pesticides to our nation's farmers.

## VII. CONCLUSION

The Court in *Sindell* first recognized the theory of market share liability, stating, "from a broader policy standpoint, defendants are better able to bear the cost of injury resulting from the manufacture of a better product ... because the risk of injury can be insured by the manufacturer and distributed among the public as a cost of doing business."<sup>138</sup> Courts have since been disinclined to apply market share liability outside of the DES situation<sup>139</sup> due to a lack of common product formula.<sup>140</sup> However, agricultural pesticides are similar to the DES situation in that they too, are susceptible to common formulations through the use of "me-too" registration.<sup>141</sup> This qualifies them as candidates for a market share liability theory of recovery.

In attempting to follow the policy stated in *Sindell*,<sup>142</sup> courts have set the defendant's percentage of liability based on its share of the market. Courts assume that the defendant with the greatest market share can best absorb the cost of liability. This was true in the line of DES drug cases because the drug was never under patent.<sup>143</sup> However, when dealing with products that have an initial period of patent protection, with manufacturers likely earning larger profits, this assumption is in error. This profit margin imbalance could occur in many different situations. Any time a drug or chemical is under patent, the profit margins among defendants may be skewed. This could occur in the manufacturing of drugs, farming or agricultural pesticides, or even a plasma base for blood transfusions. The defendant's percent of the market should be a baseline and liability adjusted up or down based on profits generated from the litigated product. The defendant could seek a liability percentage adjustment downward based on lower profit margins, which could be attributed to a myriad of reasons including research and development costs never recouped.

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<sup>137</sup> *Shackil*, *supra* note 77, at 158.

<sup>138</sup> *Sindell*, *supra* note 1, at 611.

<sup>139</sup> Ferris, *supra* note 83, at 1221-1222; Mullen, *supra* note 83, at 255-256.

<sup>140</sup> *Id.*

<sup>141</sup> GLOSSARY OF SELECTED TERMS, ABBREVIATIONS AND ACRONYMS USED IN THE OFFICE OF PESTICIDE PROGRAMS, <http://ceris.purdue.edu/info/bluebook/glossary.txt> (last visited Dec. 6, 2007).

<sup>142</sup> *Sindell*, *supra* note 1.

<sup>143</sup> Center For Disease Control, <http://www.cdc.gov/des/hcp/nurses/history.html> (last visited Sep. 28, 2007).

The plaintiff could seek a liability percentage enhancement upward if shown that the defendant garnered larger profits.

The goal the judicial system is trying to achieve, as stated in *Sindell*, is to not penalize an innocent plaintiff, but to place the financial burden on the party that can best absorb the costs.<sup>44</sup> Who better to absorb the costs than the company that profited the most from a defective product?

BENJAMIN THOMAS GREER

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<sup>44</sup> *Sindell*, *supra* note 1, at 611.