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A $1 BILLION PARABLE

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In August 2012, the jury awarded Monsanto a whopping one billion dollars in its patent infringement lawsuit against DuPont. That's real money even for today's high stakes patent disputes. Although many observers were shocked by the sheer magnitude of the award, it's really the damages theory that should provoke concern. Unlike most patent lawsuits, which are based on selling infringing products, Monsanto recovered damages even though the defendant, DuPont, hadn't sold any of its infringing genetically modified soybean seeds. Let's be perfectly clear: DuPont had made no money for any sales of infringing seeds and Monsanto had lost no sales of its seeds because of DuPont's infringement. Nevertheless, the jury awarded one billion dollars in damages to Monsanto.

But even though the parties have now settled their dispute,[1] such an astonishing result deserves a deeper look. When this award is examined more closely, it's clear that it is far too high. Although Monsanto's damages theory appears to be a straightforward application of the way patent awards reasonably royalties, Monsanto did not suffer a one billion dollar injury. The award was the result of an uncritical application of the black letter law. This case illustrates how even courts, and in the largest and most complex cases, may fail to see the forest for trees. Hopefully, lawyers can learn from this case and avoid committing the same mistakes in the future.

I. MONSANTO'S GENETICALLY MODIFIED SEEDS

Years ago, Monsanto had developed and patented genetically modified soybeans that were resistant to Monsanto's Roundup herbicide. Consequently, when farmers used Roundup to kill undesirable weeds, the soybean plants would remain unaffected. Monsanto's seed was so successful that by 2011, nine out of ten soybean farmers were using Monsanto's seeds.[2]

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1. Andrew Pollack, *Monsanto and DuPont Settle Fight Over Patent Licensing*, N.Y. TIMES, March 27, 2013, at B8, *available at* http://www.nytimes.com/2013/03/27/business/monsanto-and-dupont-settle-fight-over-roundup-ready-technology.html?_r=0.

2. *Monsanto Strong-Arms Seed Industry*, CBSNEWS.COM (Jan. 4, 2011, 10:00AM), http://www.cbsnews.com/2100-500395_162-5978152.html?pageNum=1.

DuPont was interested in entering the market and it eventually obtained a license to Monsanto's technology. Consequently, DuPont began to develop its own competing Roundup resistant soybeans. However, DuPont didn't just want to sell the same seeds as Monsanto, it wanted to sell an improved version. So DuPont tried to mix Roundup resistant traits with other desirable traits. The result was Optimum GAT ("OGAT") soybeans. Before DuPont brought its OGAT seeds to market, Monsanto sued arguing that DuPont did not have a license to stack additional traits on top of Monsanto's roundup resistant soybean seeds. If Monsanto's interpretation of the license was correct, DuPont's OGAT soybean seeds were unlicensed and infringed the RE 39,247 patent.[3] That is precisely what Monsanto alleged when it sued DuPont on May 4, 2009.[4]

Unlike most patent lawsuits that are based on selling infringing products, DuPont never sold its OGAT seeds. Here, the accusation of infringement is based on seeds that DuPont developed but had not yet sold, and the award is based on the royalties that DuPont would have paid had it negotiated a license ahead of time.

II. THE STRAIGHT FORWARD CASE FOR $ 1 BILLION

The district court did not apply the wrong law. Quite the contrary, the court relied on an existing rule and literally applied it to the unusual facts of Monsanto's dispute with DuPont. The problem is that the court failed to consider the bigger picture—to see if the law made sense in this particular context. When the verdict is viewed from this perspective, it is clear that the jury's award is far too high. To demonstrate why this is true, we must look at the theory underlying Monsanto's damages award.

There are two primary forms of money damages in patent law: lost profits and a reasonable royalty. Under 35 U.S.C. § 284, the statute governing patent damages, a prevailing patentee can receive lost profits.[5] But if the patentee does not have any lost profits or is unable to prove them, a reasonable royalty is always available.[6] In this case, DuPont's genetically modified soybean seeds had not yet made it to market. So Monsanto had not lost any sales, and the only available remedy was a reasonable royalty.

The primary method for determining a reasonable royalty is the so-called hypothetical negotiation.[7] Jurors are instructed to consider a hypo-

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3. The term "RE" indicates that Monsanto's patent was reissued. When certain conditions are met, 35 U.S.C. § 251 allows a patentee to make limited changes to the patent's claims. The claims delimit the patent's property right.

4. Docket Report, Monsanto Co. v. E.I. Dupont DeNemours and Co., Civ. #: 4:09-CV-00686-ERW (E.D. Mo. July 31, 2012).

5. 35 U.S.C. § 284 (2012).

6. *Id.*

7. In the past, courts have also used the analytical method, which focuses on the infringer's projections of profit for the infringing product. Under this method, the infringer's projected profits

thetical negotiation and ascertain the royalty upon which the parties would have agreed had they successfully negotiated a license.[8] This is the theory that Monsanto proceeded upon in its case against DuPont.[9]

Patent law imposes two important sets of conditions on the hypothetical negotiation. First, the hypothetical negotiation assumes that the patent at issue is valid and infringed.[10] Of course, this is different from what would happen during any actual negotiations where some discount would be applied for the possibility that the patent is not infringed or invalid. But unlike a real world negotiation, reasonable royalties are only awarded after the defendant has been found to infringe a valid patent.[11] Second, and more importantly for this case, the hypothetical negotiation takes place at the time of first infringement.[12] This prevents a successful patentee from enjoying the unexpected success of an infringer or suffering from its unexpected disappointments.[13] Rather, the patentee is supposed to be awarded precisely what it would have received had the parties agreed to a license.[14] It is this rule that lies at the heart of Monsanto's one billion dollar award.

The jury instructions said "[a] reasonable royalty is the amount . . . that a patent holder and the infringer would have agreed to in a hypothetical negotiation taking place at a time prior to when the infringement first began."[15] But the time of first infringement occurred before DuPont sold any product.[16] Under 35 U.S.C. § 271(a), *making* an infringing product constitutes patent infringement.[17] Thus, DuPont first infringed Monsanto's patent when it made the very first OGAT seed, and it is at this time

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are apportioned between the patent owner and the infringer. *See* TWM Mfg. Co. v. Dura Corp., 789 F.2d 895, 899 (Fed. Cir. 1986). Although not explicitly rejected, this approach is almost never used today. Lucent Techs., Inc. v. Gateway, Inc., 580 F.3d 1301, 1324 (Fed. Cir. 2009) (stating that the "more common approach" is the hypothetical negotiation).

8. Georgia-Pacific Corp. v. U.S. Plywood Corp., 318 F. Supp. 1116, 1120 (S.D.N.Y. 1970).

9. *See* Jury Instruction No. 31, Monsanto Co. v. E.I. Dupont DeNemours and Co., No. 4:09-CV-00686-ERW (E.D. Mo. July 31, 2012) (No. 1566).

10. *Lucent*, 580 F.3d at 1325.

11. *See* ROGER D. BLAIR & THOMAS F. COTTER, INTELLECTUAL PROPERTY: ECONOMIC AND LEGAL DIMENSIONS OF RIGHT AND REMEDIES, 229–30 (2005) (explaining why the hypothetical negotiation needs to make these counterfactual assumptions to avoid under compensation).

12. LaserDynamics, Inc. v. Quanta Computer, Inc., 694 F.3d 51, 76 (Fed. Cir. 2012).

13. *See* Hanson v. Alpine Valley Ski Area, Inc., 718 F.2d 1075, 1081 (Fed. Cir. 1983) ("Whether, as events unfurled thereafter, [the infringer] would have made an actual profit, while paying the royalty determined as of [the date infringement began], is irrelevant.") (citing Panduit Corp. v. Stahlin Bros. Fibre Works, Inc., 575 F.2d 1152, 1164 (6th Cir. 1978)).

14. *Lucent*, 580 F.3d at 1325.

15. *See supra* note 9.

16. DuPont elected not to commercialize the product, and Monsanto feared that this was purely a litigation tactic to influence the jury's award of damages. Transcript of Record, Vol. XV-A at 6, 10, 107, 132, Monsanto Co. v. E.I. Dupont DeNemours and Co., No. 4:09-CV-00686-ERW (E.D. Mo. July 31, 2012) (No. 1574). Monsanto successfully argued that the intent to commercialize should not affect the damages calculation. *See* Transcript of Record, Vol. XVIII at 148, Monsanto Co. v. E.I. Dupont DeNemours and Co., No 4:09-CV-00686-ERW (E.D. Mo. July 31, 2012) (No. 1581).

17. 35 U.S.C. § 271(a) (2010).

that the hypothetical negotiation takes place.[18] There was some evidence in the trial record to suggest that DuPont had previously taken fully paid-up licenses.[19] In other words, DuPont might have preferred to pay a single upfront fee instead of a running, per unit royalty. There was also evidence suggesting that DuPont's' profits would be so large that paying one billion dollars for a license to Monsanto's patent made sense.[20] Moreover, the jury was explicitly told to ignore events that occurred after the time of first infringement.[21] Thus, the jury was not supposed to consider the fact that DuPont had later decided to abandon its attempt to sell OGAT seeds.[22] Given these instructions, the award becomes less shocking, perhaps even expected.

In sum, the court's jury instructions are based on black letter law. Moreover, the jury appeared to faithfully apply these instructions to the evidence. So what could be wrong? Given that DuPont did not sell any infringing seeds, one billion dollars certainly feels too large. But lawyers are supposed to follow the law, not their feelings, right? Not always: When a result feels wrong, it is usually time to probe deeper.

III. THINKING DEEPER: THE CASE AGAINST $1 BILLION

The problem with the Monsanto award is that using the time of first infringement to calculate such a large lump-sum royalty does not reflect what happens in the real world. Standing alone, using the time of first infringement *or* awarding a lump-sum royalty can accurately model a real negotiation. But together these concepts make for an untrustworthy combination.

The time of first infringement works for most cases because juries typically calculate reasonable royalties based on the number of infringing

18. Monsanto and DuPont argued over whether there were two separate infringements for purposes of calculating damages. Transcript of Record, Vol. XVIII, *supra* note 16, at 44–47. Monsanto argued that infringement occurred in 2006, and then again in 2008. *Id.* at 44–45. DuPont argued that the law is clear, only providing for a damage calculation to be done from "a time prior to the date of first infringement." *Id.* at 46–47.

19. There was some evidence suggesting that DuPont had paid smaller lump-sum royalties for unproven technology in the past. Transcript of Record, Vol. XV-B at 27–28, 95–96, Monsanto Co. v. E.I. Dupont DeNemours and Co., No. 4:09-CV-00686-ERW (E.D. Mo. July 31, 2012) (No. 1576).

20. *See* Transcript of Record, Vol. XVIII, *supra* note 16, at 145–47 (revealing that internal projections at DuPont showed "198 million additional sales").

21. *See* Jury Instruction No. 31, *supra* note 9 ("Evidence of things that happened after the infringement first began can be considered . . . only to the extent that the evidence aids in assessing what royalty would have resulted from a hypothetical negotiation.").

22. Leo Sun, *DuPont Loses a $1 Billion Settlement to Monsanto*, INVESTORGUIDE.COM (Aug. 3, 2012), http://www.investorguide.com/article/10842/dupont-dd-loses-a-1-billion-settlement-to-monsanto-mon/. *See also* Jack Kaskey, *DuPont and Monsanto Agree to End Lawsuits*, BLOOMBERG (Mar. 26, 2013, 2:20PM), http://www.bloomberg.com/news/2013-03-26/dupont-monsanto-agree-to-end-lawsuits.html ("Today's agreement won't prompt a revival of the abandoned GAT project . . . .").

products sold.[23] This accurately models most real world licenses, which require payments based on the number of licensed units that are sold.[24] One benefit of this type of award is that it minimizes the possibility that juries will inaccurately predict the royalty base.[25] Juries do not have to figure out how many infringing units the parties thought the infringer would have sold at the time of first infringement. The number of actual infringing units is used. Thus, the only value that the jury calculates is the royalty rate.

Now it is also perfectly acceptable for juries to award lump-sum reasonable royalties. Lump-sum awards allow the infringer to continue to sell the infringing product because they have paid a flat sum for the unlimited use of the plaintiff's patent. Lump-sum awards also accurately model those occasional real world licenses that only involve a single payment. However, one problem with this type of award is that it increases the possibility that jurors will rely on the wrong assumptions to calculate damages. They do not just have to calculate the royalty rate; juries need to determine the number of units the infringer was likely to sell. Obviously, this increases the possibility for mistake. The Monsanto verdict illustrates how far off the jury can be. The one billion dollars clearly assumed that DuPont would have sold a lot of seed. But we know that DuPont sold none.

The problem is that using the time of first infringement to arrive at a huge lump-sum is not consistent with how real world companies behave. No company, even a Fortune 500 company like DuPont, would pay one billion dollars to license an untested product under development. That is particularly true for emerging technologies like genetically modified organisms. Indeed, that is just what one DuPont witness explained.[26] The results are simply too unpredictable to risk such a large sum of money. Companies can only afford to pay such amounts when success is more certain. That is why running royalties are so popular. It reduces the risk of failure. It's true that some licenses can involve both a flat fee and a

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23. *See* Lucent Techs., Inc. v. Gateway, Inc., 580 F.3d 1301, 1339 (Fed. Cir. 2009) ("[A]warding a reasonable royalty based on . . . number of units sold can be economically justified.").

24. *See* Ronald G. Vollmar & Jeffrey S. Whittle, *Calculating Reasonable Royalty Damages in the Changing World of Patent Litigation in the United States*, ASPATORE, Nov. 2012, at 8, *available at* 2012 WL 6636453 ("[T]he running royalty is the form financial experts most frequently use . . . ."). We are comparing the lump-sum royalty model to a per unit or running royalty model. In the latter case, royalty amounts are based on the number of units sold. By basing royalty amounts on the number of units sold (quantity or a percentage of revenue) the risk is shared between the licensee and licensor. In a lump-sum model, the risk shifts to the licensee. 4 ROBERT A. MATTHEWS, ANNOTATED PATENT DIGEST § 30:90 (2013).

25. A "royalty base" is generally calculated on a "base of sales of a particular infringing product." Ravi Mohan, *Analysis of the Entire Market Value Rule in Complex Technology Litigation: Arduous Royalty Base Determinations, Unjust Damage Rewards, and Empirical Approaches to Measuring Consumer Demand*, 27 SANTA CLARA COMPUTER & HIGH TECH. L.J. 639, 642 (2011) (internal quotation marks omitted).

26. Transcript of Record, Vol. XV-A, *supra* note 16, at 100–01.

running royalty payment. That is actually what Monsanto and DuPont eventually settled upon.[27] Their recent settlement calls for DuPont to pay $1.75 billion spread over ten years with some additional payments that depend on the success of DuPont's product.[28] The original $1 billion jury award undoubtedly had a strong influence on the size of this settlement.[29] However, the point is that DuPont would not voluntarily pay a huge lump-sum fee.

It is beyond the scope of this Essay to fully explain how the court or DuPont's attorneys could have avoided the one billion dollar verdict. A disturbing part of this case's docket has been sealed, including documents related to a motion to exclude the opinions of Monsanto's damages expert.[30] Consequently, we could not examine the parties' tactics or the court's decisions. It is hard to make concrete recommendations based on an incomplete record; however, we do have some of the facts. We know that DuPont was opposed to a large lump-sum award because it had not sold any infringing seeds and was no longer planning to enter the market.[31] Therefore, it was in DuPont's interest for any damages award to be issued in the form of a per unit royalty.[32]

We also know what the evidence at trial showed. There was some testimony suggesting that the value of a license to Monsanto's Roundup resistant technology was one billion dollars.[33] In addition, DuPont admitted at least some insignificant licenses in the agricultural industry take the form of a fully paid-up license (as opposed to a running royalty).[34] But there does not appear to be any evidence suggesting that DuPont was

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27. *See* Carey Gillam, *Monsanto, DuPont Settle Lawsuits, Set New $1.75 Billion Deal*, FOX BUS. (Mar. 26, 2013), http://www.foxbusiness.com/news/2013/03/26/monsanto-dupont-settle-lawsuits-set-new-175-billion-deal/.

28. *Id.*

29. The settlement consists of "up-front and variable based royalty payments." Beginning in 2014, DuPont will make four annual fixed royalty payments totaling $802 million to Monsanto. DuPont also agreed to pay additional royalties if it successfully sells genetically modified soybean seed in excess of the annual minimums. The annual minimums, which begin in 2018, total $950 million over six years. Press Release, DuPont and Monsanto Reach Technology Licensing Agreements on Next-Generation Soybean Technologies (Mar. 26, 2013), *available at* http://www.wcax.com/story/21794044/dupont-and-monsanto-reach-technology-licensing-agreements-on-next-generation-soybean-technologies. The "variable based payments" will be determined by the volume of seeds DuPont sells. *Id.*

30. *See* Bernard Chao, *Non-Public Litigation: The Hidden Story of Monsanto v. DuPont*, PATENTLY-O (Aug. 11 2012, 7:57 AM), http://www.patentlyo.com/patent/2012/08/non-public-litigation-the-hidden-story-of-monsanto-v-dupont.html.

31. *See* Transcript of Record, Vol. XVIII, *supra* note 16 at 179 (arguing "there are no sales" and it was "just for research").

32. The jury only heard testimony regarding a lump-sum royalty award. Transcript of Record, Vol. XVIII, *supra* note 16, at 47–48. Consequently, the jury verdict form only provided a single line for the jury to award damages. *See* Jury Verdict Form at 5, Monsanto Co. v. E.I. Dupont DeNemours and Co., No. 4:09-CV-00686-ERW (E.D. Mo. July 31, 2012).

33. *See* Transcript of Record, Vol. XVIII, *supra* note 16, at 145–48 (arguing that DuPont had a six year head start, accounting for $800 million to $1 billion dollars in value).

34. *See* Transcript of Record, Vol. XV-B, *supra* note 19, at 27–28.

willing to enter into such a license for Monsanto's technology.[35] Accordingly, DuPont should have been able to prevent the jury from even considering such a large lump-sum award. This could have taken the form of a motion in *limine* precluding Monsanto's witnesses from even proposing such an award.[36] Alternatively, DuPont could have asked for an instruction that required the jury to calculate damages based on the number of infringing seeds.

So long as the evidence did not show that DuPont was willing to pay a one billion dollar lump sum, DuPont still had some room to maneuver. Its attorneys elicited testimony from its damages experts discussing the risk of paying huge sums of money upfront.[37] Relying on such testimony, DuPont could have asked for a jury instruction requiring substantial evidence that DuPont was willing to assume the risk of failure before allowing the jury to award a lump-sum. Alternatively, the jury could have also been told that the larger the verdict the more they should consider awarding a running royalty. Finally, DuPont could have simply asked the court to overturn the damages award because there was no evidence suggesting that DuPont was willing to assume such a large risk.[38]

CONCLUSION

Although this Essay suggests that the Monsanto case was decided wrongly, it cannot say so with certainty until the Court unseals the critical documents. But that is not the point.[39] This Essay simply uses the Monsanto case to illustrate what can happen when the law is applied without question. Mistakes are made. The lesson all lawyers should take away is: When the application of the law leads to results that feel wrong, probe deeper. Often you will find that the law does not work with the facts of your case. You can then argue that the law needs to be changed or that it should not be applied to your facts.

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35. *See, e.g.*, Transcript of Record, Vol. XV-A, *supra* note 16, at 100–01 (discussing a proposal from Monsanto to license the technology to DuPont for $1.5 billion that DuPont ultimately rejected).

36. This may be the subject of DuPont's motion to exclude that was filed under seal on March 6, 2012. Motion to File Under Seal, Monsanto Co. v. E.I. Dupont DeNemours and Co., No. 4:09-CV-00686-ERW (E.D. Mo. July 31, 2012) (No. 1119).

37. *See* Transcript of Record, Vol. XV-A, *supra* note 16, at 100–01 (paying "lump sum amounts for unproven technology" would not be considered).

38. This would be accomplished by a motion for judgment as a matter of law (JMOL) or a remittitur. *See* FED. R. CIV. P. 50(a), 59(e).

39. To be clear, this Essay is not intended as a criticism of DuPont's attorneys or the court. Rather, because the one billion dollar verdict looks horribly wrong, this Essay simply seeks to use this case to teach critical analysis.