

IN THE UNITED STATES DISTRICT COURT
FOR THE MIDDLE DISTRICT OF NORTH CAROLINA

SYNGENTA CROP PROTECTION,)	
LLC,)	
)	
Plaintiff,)	
)	
v.)	1:15-CV-274
)	
WILLOWOOD AZOXYSTROBIN,)	
LLC, et al.,)	
)	
Defendants.)	

MEMORANDUM OPINION AND ORDER

Catherine C. Eagles, District Judge.

Syngenta Crop Protection, LLC sued Willowood¹ for patent infringement, seeking millions of dollars in lost profits on its fungicides containing azoxystrobin. Willowood seeks to exclude the opinions of Syngenta’s expert witness on damages, Dr. Benjamin Wilner, as speculative and unreliable because he used inaccurate budget projections and irrelevant product comparisons to calculate Syngenta’s lost profits. The Court will admit Dr. Wilner’s opinions on lost profits for the 5,602,076 Patent and the 5,633,256 Patent because they are based on sufficient facts and data. However, the Court will exclude his opinions on lost profits for the 5,847,138 Patent and the 8,124,761 Patent because they are not based on sufficient facts or reliable principles.

¹ There are four affiliated defendants: Willowood, LLC; Willowood USA, LLC; Willowood Azoxystrobin, LLC; and Willowood Limited. In this motion, the actions of the particular defendants are not relevant and for simplicity, the Court will use the term “Willowood” to refer collectively to the defendants.

Willowood also seeks to exclude Dr. Wilner's testimony about Willowood's successful effort to obtain EPA registration of its fungicides. The Court will admit Dr. Wilner's testimony on Willowood's early entry into the market because it is relevant to his theory of damages. The Court will exclude his testimony on whether Willowood misused the Formulators' Exemption because it is not relevant to his calculation of damages, nor does Dr. Wilner appear competent to testify to those facts.

The motion will be granted in part and denied in part.

I. Background Facts on Infringement and Damages

Syngenta uses the patents-at-issue to manufacture fungicides containing azoxystrobin, which it sells in the agricultural market. The '076 Patent and the '256 Patent claim a group of chemical compounds that includes azoxystrobin. The compound patents expired in February 2014. Doc. 96-1 at ¶ 29. The '138 Patent, which expired in December 2015, and the '761 Patent, which will expire in 2029, both claim methods of manufacturing azoxystrobin. *Id.* at ¶¶ 30-31. Syngenta seeks damages for Willowood's infringement of each patent and an injunction to prevent Willowood's continued infringement of the '761 Patent. *See* Doc. 1 at pp. 26-27.

In 2013, Willowood imported five kilograms of azoxystrobin into the United States, infringing the compound patents. Doc. 141 at 4. Willowood further infringed the compound patents by commissioning a third party to use the azoxystrobin to formulate fungicides. *Id.* at 6. Based on the formulations, the EPA approved Willowood's application to register its fungicides containing azoxystrobin in 2014. Docs. 164-26, 164-27. Willowood began to sell its generic azoxystrobin fungicides in the United States that

same year at substantially lower prices than Syngenta. *See* Doc. 149-1 at 13. Syngenta asserts that Willowood’s infringement caused lost profits through its early entry into the market and through its infringing sales.

Syngenta contends that if Willowood had not infringed the compound patents, Willowood would not have been able to formulate its products and register with the EPA in 2014 and would not have entered the market until late 2015. *Id.* at 11, 36. Similarly, if Willowood had waited until the ‘138 Patent expired to use azoxystrobin made with the ‘138 Patent’s claimed method, Willowood would have entered the market in 2016. *See id.* at 40. According to Syngenta, Willowood’s head start caused Syngenta to lose sales, forced it to reduce prices to compete before its exclusivity expired, and gave Willowood a greater market presence than it would have had if it had entered the market later.² *Id.* at 15-16. Syngenta seeks to recover lost profits for the compound and ‘138 Patents from 2014-2017 caused by Willowood’s head start in the market. *Id.* at 27-40.

Syngenta also asserts that Willowood’s importation and sales of azoxystrobin infringed the ‘138 and ‘761 patents because Willowood’s azoxystrobin is made through the patents’ claimed processes. *See id.* at 11. Syngenta seeks lost profit damages for Willowood’s sales that infringed the ‘138 Patent from 2014-2015³ and the ‘761 Patent

² According to Dr. Wilner, generics have an initial “minimal impact” followed by a lingering effect in the market, meaning that a generic’s head start in the market causes greater lost profits over time. Doc. 149-1 at 15, 25-26, 40.

³ While Syngenta seeks lost profits on the ‘138 Patent for actually infringing sales from 2014-2015 and for head-start damages from 2014-2017, Dr. Wilner’s calculation of lost profits accounts for these together. *See* Doc. 149-1 at 38-39.

from 2014-2017. *Id.* at 37-43. Syngenta’s expert, Dr. Benjamin Wilner,⁴ calculated Syngenta’s head-start damages and damages from Willowood’s infringing sales together through a lost profits analysis. *See id.* His methods and analysis are discussed in more detail *infra*.

II. The Law on Damages for Lost Profits

An award of damages for patent infringement should be “adequate to compensate for the infringement, but in no event less than a reasonable royalty.” 35 U.S.C. § 284. A patentee may prove lost profit damages by creating a hypothetical “but for world,” where infringement has been “factored out of the economic picture.” *Grain Processing Corp. v. Am. Maize–Prods. Co.*, 185 F.3d 1341, 1350 (Fed. Cir. 1999). “Reconstructing the market [is] by definition a hypothetical enterprise.” *Id.* “To prevent the hypothetical from lapsing into pure speculation,” courts require “sound economic proof of the nature of the market.” *Id.*; *see also Versata Software, Inc. v. SAP Am., Inc.*, 717 F.3d 1255, 1265 (Fed. Cir. 2013).

The hypothetical nature of the evidence does not make it inadmissible. Indeed, the Federal Circuit “has affirmed lost profit awards based on a wide variety of reconstruction theories,” including the theories of lost sales and price erosion.⁵ *Crystal Semiconductor*

⁴ Dr. Wilner is an economist with a doctorate in managerial economics and decision science. Doc. 149-1 at 3. He regularly testifies as an expert witness on financial damages, *see id.* at 55-56, and his qualifications are not at issue.

⁵ “Lost sales and price erosion damages are inextricably linked.” *Crystal Semiconductor Corp. v. TriTech Microelects. Int’l, Inc.*, 246 F.3d 1336, 1360 (Fed. Cir. 2001). For instance, an increase in price will often decrease sales. *See id.*; *Ericsson, Inc. v. Harris Corp.*, 352 F.3d 1369, 1378 (Fed. Cir. 2003).

Corp. v. TriTech Microelecs. Int'l, Inc., 246 F.3d 1336, 1355-56 (Fed. Cir. 2001); *see also Grain Processing*, 185 F.3d at 1350 (collecting cases).

To obtain damages for lost sales, the patentee must show “a reasonable probability that he would have made the asserted sales ‘but for’ the infringement.” *Grain Processing*, 185 F.3d at 1349. Under the *Panduit* factors, the patentee satisfies this by proving “(1) demand for the patented product, (2) absence of acceptable noninfringing substitutes, (3) his manufacturing and marketing capability to exploit the demand, and (4) the amount of the profit he would have made.” *Panduit Corp. v. Stahlin Bros. Fibre Works, Inc.*, 575 F.2d 1152, 1156 (6th Cir. 1978).

Similarly, to obtain damages under a price erosion theory, a patent owner must (1) “show that ‘but for’ infringement, it would have sold its product at a higher price;” (2) “present evidence of the (presumably reduced) amount of product the patentee would have sold at the higher price;” and (3) “account for the nature, or definition, of the market, similarities between any benchmark market and the market in which price erosion is alleged, and the effect of the hypothetically increased price on the likely number of sales at that price in the market.” *Ericsson, Inc. v. Harris Corp.*, 352 F.3d 1369, 1378 (Fed. Cir. 2003) (quotations omitted). Experts can use the benchmark methodology⁶ to calculate price erosion damages by “select[ing] a product similar to the

⁶ In patent litigation, experts also rely on the benchmark methodology to calculate a reasonable royalty, using similar licenses as evidence of the hypothetical negotiation between the patentee and infringer. *See, e.g., AstraZeneca AB v. Apotex Corp.*, 782 F.3d 1324, 1335-37 (Fed. Cir. 2015) (upholding use of licenses and settlements between the patentee and other parties for the patented formulation as benchmarks to determine reasonable royalty); *ActiveVideo Networks*,

patented product and compar[ing] the performance of that benchmark in a market free of infringement with the performance of the patented product in the market affected by infringement.” *Crystal*, 246 F.3d at 1357; *see Ericsson*, 352 F.3d at 1378-79 (calculating price erosion by comparing the actual performance of the patented product to the performance of a benchmark product made by the patentee in a market with the same conditions but without infringement).

III. Benchmarks

A. Overview of Dr. Wilner’s Evidence

In his report, Dr. Wilner calculated Syngenta’s lost profits caused by Willowood’s infringement. For each year from 2014-2017 and for each of the patents-at-issue, he used benchmarks to determine what Syngenta’s gross profits would have been for azoxystrobin in a hypothetical market unaffected by Willowood’s infringement. *See* Doc. 149-1 at 27-43. From these hypothetical gross profits, he subtracted both Syngenta’s actual gross profits on azoxystrobin and the estimated incremental costs that

Inc. v. Verizon Commc’ns, Inc., 694 F.3d 1312, 1333 (Fed. Cir. 2012) (upholding admission of expert’s testimony using licenses between the patentee and other parties for asserted patents and other technologies to determine reasonable royalty). Additionally, the benchmark or yardstick methodology can apply outside of patent litigation. *See Dash v. Mayweather*, 731 F.3d 303, 319 (4th Cir. 2013) (evaluating whether chosen benchmarks were insufficiently similar to calculate music licensing fee); *United States v. Broad. Music, Inc.*, 316 F.3d 189, 194 (2d Cir. 2003) (noting determination of reasonable music licensing fee “is often facilitated by the use of a benchmark—that is, reasoning by analogy to an agreement reached after arms’ length negotiation between similarly situated parties.”)

Syngenta would have incurred to obtain the hypothetical gross profits.⁷ *Id.* at 25, 33-35, 67-68. The amount of money that remained was, in his opinion, Syngenta's lost profits. *Id.* at 35, 67. Stated another way: Hypothetical Gross Profits in a Non-Infringing World minus Syngenta's Actual Gross Profits minus Incremental Costs equals Syngenta's Lost Profit Damages.

Depending on the particular year and patents-at-issue, Dr. Wilner chose two benchmarks,⁸ which he used to calculate Syngenta's hypothetical gross profits. He used the first benchmark—the extent to which a benchmark product's actual gross profits either met its budgeted gross profits or increased or decreased from the past year—to adjust the second benchmark—Syngenta's budgeted gross profits or past gross profits for azoxystrobin. Dr. Wilner's choice of benchmarks and his calculations are described in more detail later in this opinion, as the Court examines the admissibility of his opinions.

B. Analysis

For his expert testimony to be admissible, Dr. Wilner must base his opinions “on sufficient facts or data” and must employ “reliable principles and methods.” Fed. R.

⁷ To sell more product, Syngenta would have had to make more product, which would have cost more money. By subtracting incremental costs, Dr. Wilner accounted for Syngenta's additional expenses in the hypothetical, non-infringing market. *See* Doc. 149-1 at 25.

⁸ Dr. Wilner uses the term “benchmark” to mean something different from the way the term is often used in the case law about benchmarks. He does not directly compare the benchmark product's performance in a non-infringing market to the infringed product's actual performance. *See, e.g., Ericsson*, 352 F.3d at 1378-79. Instead he compares azoxystrobin's actual performance to its hypothetical gross profits in a non-infringing market, calculated by adjusting one benchmark, Syngenta's budgeted gross profits or past gross profits for azoxystrobin, with another benchmark, Syngenta's experience with another product.

Evid. 702. “[T]he trial judge must ensure that any and all scientific testimony or evidence admitted is not only relevant, but reliable.” *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579, 589 (1993). However, the fact finder, not the court, must determine whether an expert is credible and whether the expert’s opinions are correct. *Apple Inc. v. Motorola, Inc.*, 757 F.3d 1286, 1314 (Fed. Cir. 2014), *overruled in part not relevant here by Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1349 (Fed. Cir. 2015) (en banc); *i4i Ltd. P’ship v. Microsoft Corp.*, 598 F.3d 831, 854 (Fed. Cir. 2010) (“*Daubert* and Rule 702 are safeguards against unreliable or irrelevant opinions, not guarantees of correctness.”), *aff’d*, 564 U.S. 91 (2011). “Vigorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking shaky but admissible evidence.” *Summit 6, LLC v. Samsung Elecs. Co.*, 802 F.3d 1283, 1296 (Fed. Cir. 2015) (quoting *Daubert*, 509 U.S. at 596).

Willowood does not object to Dr. Wilner’s method: computing lost profits by subtracting actual gross profits and incremental costs from hypothetical gross profits calculated by adjusting one benchmark with another. While this method does not use a typical lost sales or price erosion approach, as long as appropriate benchmarks are selected, it accounts for lost sales and price erosion, and for inaccuracies in the benchmarks. However, Willowood contends that Dr. Wilner’s opinions are inadmissible because he did not base his choice of benchmarks on sufficient facts or data.

To rely on a benchmark for price erosion, the party must offer “substantial evidence of the similarities” between the benchmark product and the infringed product

and between their two markets. *Ericsson*, 352 F.3d at 1379 (upholding price erosion damages using benchmark of similar product with one technological difference, produced by the same company, and sold in a similarly competitive market). As long as an expert provides some evidence of their similarities, then “[t]he degree of comparability of” the products and their markets and the failure “to control for certain variables are factual issues best addressed by cross examination and not by exclusion.” *ActiveVideo Networks, Inc. v. Verizon Commc’ns, Inc.*, 694 F.3d 1312, 1333 (Fed. Cir. 2012); *see also i4i*, 598 F.3d at 852 (“When the methodology is sound, and the evidence relied upon sufficiently related to the case at hand, disputes about the degree of relevance or accuracy . . . may go to the testimony’s weight, but not its admissibility.”).

1. The Compound Patents

a. Dr. Wilner’s Calculations

Dr. Wilner used two benchmarks to calculate damages for the compound patents: Syngenta’s budgeted gross profits for azoxystrobin and the budgeted gross profits and actual performance of mesotrione, an herbicide made by Syngenta. Doc. 149-1 at 30. For 2014, Dr. Wilner calculated the extent to which Syngenta’s actual gross profits for mesotrione met its budgeted gross profits. *Id.* at 33. He assumed that but for Willowood’s infringement, Syngenta would have met its budgeted gross profits for azoxystrobin to the same extent as it had for mesotrione. *See id.* Using this method, he

calculated that Syngenta's hypothetical gross profits were \$140,943,000.⁹ *Id.* at 34, 68 ln.4. After subtracting Syngenta's actual gross profits and incremental costs from its hypothetical gross profits, Dr. Wilner found that but for Willowood's infringement, Syngenta lost \$20,020,000 in 2014. *Id.* at 67 lns.1-4, 68 lns.4-6. To determine the extent of Syngenta's lost profits due to Willowood's head start in the market, he followed a similar process for 2015, 2016, and 2017.¹⁰ *Id.* at 34-35, 67-68.

Explaining his choice of benchmark, Dr. Wilner opined that "Syngenta's budgets are an informative benchmark for what sales and profits would have been" for azoxystrobin without Willowood's infringement. *Id.* at 38; *see* Doc. 197 at 231:8-:21. Dr. Wilner learned about "Syngenta's exacting budgeting process" through discussions with several employees, Doc. 149-1 at 30; *see also* Doc. 197 at 107:6-:18, 109:7-:14, whom Syngenta intends to call as trial witnesses to testify about the budgeting process. *See* Doc. 221 at 48:2-:15. In his report, Dr. Wilner also noted several factors evaluated in

⁹ Specifically, Syngenta budgeted that its gross profits of azoxystrobin would be \$166,594,000. Doc. 149-1 at 68 ln.1. Mesotrione missed its budgeted gross profits for 2014 by 15.4%, *id.* at 69, so Dr. Wilner assumed that azoxystrobin would have missed its budget projections to the same extent. *See id.* at 68 lns.1-4. Using the mesotrione benchmark to adjust the budget benchmark, Dr. Wilner concluded that Syngenta's hypothetical gross profits for azoxystrobin in 2014 were \$140,943,000. *Id.* at 68 ln.4.

¹⁰ For 2014, Dr. Wilner started with Syngenta's 2014 Gross Profits Budget, but for 2015-2017, Dr. Wilner had to calculate the budgeted gross profits for the hypothetical, non-infringing world. Doc. 149-1 at 33-35. To do so, he increased the actual gross profits budget to the same extent the previous year's hypothetical gross profits for azoxystrobin exceeded the actual gross profits. *Id.* at 34-35, 68 lns.8-10, 18-20, 28-30.

Dr. Wilner's calculations for damages in 2016 and 2017 on all of the patents-at-issue rely on limited information because Dr. Wilner completed his report on August 19, 2016. *See id.* at 46. For instance, for 2016, he relied on the latest projections from June 2016 rather than data from the full year. *See id.* at 31, 68 ln.25, 76 ln.17, 84 ln.17.

the budgeting process, including the product's exclusivity status, the crops it protects, and the weather patterns and geographic pressures affecting those crops. Doc. 149-1 at 30-31.

Dr. Wilner also found mesotrione to be an appropriate benchmark for azoxystrobin. *Id.* at 31-32; Doc. 197 at 243:3-244:1. The compound patents and Syngenta's data exclusivity¹¹ for mesotrione created similar barriers against generics entering both markets. Doc. 149-1 at 31-32; *see* Doc. 149-10 at 3. Mesotrione protects the same major crops as azoxystrobin and both are top-sellers for Syngenta. Doc. 149-1 at 31. Finally, the products have comparable lifecycles, such as evolving mixtures of active ingredients. *Id.* at 31-32; *see* Doc. 167-2 at 265:12-267:14; Doc. 197 at 242:4-:23 (noting similar post exclusivity strategies for mesotrione and azoxystrobin).

Dr. Wilner verified his calculations in two ways. First, he determined that mesotrione was a conservative benchmark. In 2014, non-azoxystrobin fungicides¹² missed their budgeted gross profits by only 4.2% and all other Syngenta products by 10.2%, while mesotrione missed its budgeted gross profits by 15.4%. Doc. 149-1 at 33. Second, Dr. Wilner confirmed that Willowood gained a one-year head start through its infringement. *See id.* at 36, 70. He found that Syngenta's hypothetical gross profits for 2015—when generics were expected to enter the market after the compound patents' expiration—were roughly equal to its actual gross profits for 2014—when Syngenta

¹¹ This data exclusivity prevented generics from relying on Syngenta's mesotrione data in their own mesotrione registration applications before June 4, 2014. Doc. 149-1 at 32.

¹² *Infra* note 13.

effectively lost exclusivity for the compound patents due to Willowood's infringement and early entry into the market. Doc. 221 at 49:21-50:20 (discussing Doc. 149-1 at 70).

b. Admissibility

Dr. Wilner tied his theory of damages to the facts of this case. *See i4i*, 598 F.3d at 855-56; *see also Uniloc USA, Inc. v. Microsoft Corp.*, 632 F.3d 1292, 1315-17 (Fed. Cir. 2011) (requiring basis in the facts of the case for application of a particular damages theory). His benchmark methodology provides a reasonably reliable method of calculating gross profits in a hypothetical, non-infringing world. *See Grain Processing*, 185 F.3d at 1350; *Ericsson*, 352 F.3d at 1377, 1378-79 (approving expert's market construction and benchmark methodology). Dr. Wilner opined that Syngenta's budgets and mesotrione sales provide appropriate benchmarks for azoxystrobin. *See* Doc. 149-1 at 29-31, 38. He discussed the budgeting process with Syngenta's employees and Syngenta will provide further evidence of that process at trial. He also analyzed the similarities between azoxystrobin, mesotrione, and their markets. *Id.* at 31-32; *see Ericsson*, 352 F.3d at 1379. Dr. Wilner's opinion is based on "sufficient facts" and "reliable principles." Fed. R. Evid. 702. The Court will admit Dr. Wilner's opinion on damages for the compound patents.

Willowood asserts that Syngenta's budgets are inappropriate benchmarks because they are wildly inaccurate: past budgets have overestimated and underestimated gross profits by almost 30%. *See* Docs. 149-3 (azoxystrobin), 149-4 (mesotrione). Willowood also contends that Dr. Wilner did not adequately verify the budgets and cherry picked budgets, without explaining his choice.

If an expert's damages calculations "lack a reasonable basis in fact," *Rondigo, L.L.C. v. Casco Twp.*, 537 F. Supp. 2d 891, 899 (E.D. Mich. 2008), or are based on budget projections with "no coherent explanation" of their methodology, *Sunlight Saunas, Inc. v. Sundance Sauna, Inc.*, 427 F. Supp. 2d 1022, 1030 (D. Kan. 2006), then the court should exclude the expert's testimony. Here, Dr. Wilner has provided facts and data sufficient to support his opinion, and Willowood's concerns on the accuracy of the budgets and his testimony are not for the Court to resolve. *See Galaxy Comput. Servs., Inc. v. Baker*, 325 B.R. 544, 560-61 (E.D. Va. 2005) (denying motion to exclude expert testimony that was based on a budget and supported by data). Dr. Wilner concluded, as an economist and with his experience calculating damages, that Syngenta's budget process was exacting and reliable. Doc. 149-1 at 55; *supra* p. 10-11. He provided an overview of the process in his report and Syngenta will offer further evidence at trial. *Id.* at 30-31; Doc. 221 at 48:2-:15. Most importantly, Dr. Wilner also accounted for imperfections in Syngenta's azoxystrobin budgets by adjusting them based on how well Syngenta budgeted gross profits for mesotrione. Doc. 149-1 at 33. Finally, he verified his analysis, considering other possible benchmarks and comparing his calculation of hypothetical gross profits with Syngenta's actual experience. *Supra* p. 11-12. A history of inaccurate budgets, the failure to consider particular aspects of the budget process, and Dr. Wilner's choice of budgets affect the weight of his testimony, not its admissibility. *See i4i*, 598 F.3d at 852. Dr. Wilner's failure to account for particular facts and Willowood's other challenges to his opinion are best addressed by cross-examination, not by exclusion. *ActiveVideo*, 694 F.3d at 1333.

Willowood also asserts that mesotrione is not sufficiently comparable to azoxystrobin to provide a reliable benchmark because Syngenta retained exclusivity over mesotrione while the compound patents expired in 2014. *See* Doc. 149-10 at 3 (noting Syngenta sold 88% of its mesotrione in mixtures still protected by patent). First, Dr. Wilner did not suggest that gross profits on azoxystrobin would have been the same as mesotrione. Rather, he used the mesotrione benchmark to adjust the budgeted gross profits for azoxystrobin to account for market factors overlooked by the budgeting process. Doc. 149-1 at 33; *see* Doc. 197 at 248:20-249:22. Second, Dr. Wilner analyzed the similarities between azoxystrobin and mesotrione and their markets. Doc. 149-1 at 31-32. The law does not require the markets of the infringed and benchmark products to be identical for the benchmark to be helpful to the jury. *See Ericsson*, 352 F.3d at 1378-79 (requiring price erosion theory to account for similarities, but allowing for differences, between the benchmark product and the infringed product and their markets). Dr. Wilner's analysis, which provides several points of comparison including exclusivity, is sufficient. The degree of comparability between mesotrione and azoxystrobin is best addressed on cross-examination. *See ActiveVideo*, 694 F.3d at 1333; *i4i*, 598 F.3d at 852.

2. The '138 Patent

a. Dr. Wilner's Calculations

For the '138 Patent, Dr. Wilner used one set of benchmarks to calculate hypothetical gross profits in 2014 and 2015, when Willowood's importation and sales of azoxystrobin allegedly infringed the patent. He used another set of benchmarks to calculate hypothetical gross profits in 2016 and 2017, after the '138 Patent expired and

when Willowood's allegedly infringing head start continued to cause Syngenta to lose profits.

For 2014, Dr. Wilner calculated the extent to which Syngenta's gross profits for non-azoxystrobin fungicides¹³ increased or decreased from the past year. Doc. 149-1 at 39. He assumed that but for Willowood's infringement, Syngenta would have experienced the same increase or decrease in its gross profits for azoxystrobin from the past year. *Id.* According to his calculations, Syngenta's hypothetical gross profits in 2014 were \$154,142,000.¹⁴ Dr. Wilner used the same method to calculate lost profits for 2015, beginning with the hypothetical gross profits he calculated for 2014 and reducing them by 3%, because gross profits for non-azoxystrobin fungicides decreased by 3% in 2015 from 2014. *Id.* at 39, 76 ln.8.

Dr. Wilner opined that Willowood's head start in the market continued to cause Syngenta to lose profits in 2016 and 2017. *Id.* at 40. Dr. Wilner used Syngenta's gross

¹³ "Non-azoxystrobin fungicides" refers to a group of crop protection fungicides that excludes azoxystrobin fungicides. Dr. Wilner refers to this aggregation of products as "Crop Protection Fungicides." *See* Doc. 149-1 at 38 & n.209. For clarity, and because Dr. Wilner excluded azoxystrobin from this group, the Court will use the term "non-azoxystrobin fungicides."

¹⁴ Specifically, Syngenta's gross profits for azoxystrobin in 2013 were \$140,037,000. Doc. 149-1 at 76 ln.1. Gross profits for non-azoxystrobin fungicides in 2014 exceeded those in 2013 by 10.1%, so Dr. Wilner assumed that gross profits for azoxystrobin would have increased to the same extent. *Id.* at 39, 76 lns.1-4. Using the non-azoxystrobin fungicides benchmark to adjust the past profits benchmark, Dr. Wilner concluded that Syngenta's hypothetical gross profits for azoxystrobin in 2014 were \$154,142,000. *Id.* at 76 ln.4. After subtracting Syngenta's actual gross profits and incremental costs from its hypothetical gross profits, Dr. Wilner found that but for Willowood's infringement, Syngenta lost \$33,206,000. *Id.* at 75 lns.1-4, 76 lns.5-6.

profits for azoxystrobin in 2014, when Willowood effectively ended Syngenta's exclusivity, as the benchmark for 2016, when Syngenta actually lost exclusivity.¹⁵ *Id.* at 39. He calculated the extent to which Syngenta's gross profits for azoxystrobin in 2014 decreased from 2013. He then assumed that but for Willowood's infringement, Syngenta would have experienced the same decrease from its hypothetical gross profits in 2015. *Id.* Using this method, he calculated that in 2016, Syngenta's hypothetical gross profits for azoxystrobin were \$129,046,000.¹⁶ Dr. Wilner used the same method to calculate lost profits for 2017.

Dr. Wilner again verified his analysis. First, Dr. Wilner opined that Syngenta's experience in 2014 was a conservative benchmark for 2016, because 2014 experienced a general decline in the agricultural economy. *Id.* at 39. Second, he confirmed his theory that Willowood gained a two-year head start by infringing the '138 Patent. *See id.* at 40, 78. He found that Syngenta's hypothetical gross profits from 2016 and 2017, when

¹⁵ Willowood does not object to Dr. Wilner's use of actual data on azoxystrobin fungicides from 2014-2015 in his calculations for 2016-2017. There is hardly a better benchmark than Syngenta's actual experience.

¹⁶ Specifically, Syngenta's hypothetical gross profits for azoxystrobin in 2015 were \$149,467,000. Doc. 149-1 at 76 ln.13. Syngenta's gross profits on azoxystrobin in 2014 decreased from its gross profits in 2013 by 13.7%, so Dr. Wilner assumed that gross profits for azoxystrobin in 2016, after the '138 Patent expired, would have decreased to the same extent. *Id.* at 76 lns.14-15. Using the 2014 gross profits for azoxystrobin as a benchmark to adjust the past year's hypothetical gross profits benchmark, Dr. Wilner concluded that Syngenta's hypothetical gross profits for azoxystrobin were \$129,046,000. *Id.* at 76 ln.16. After subtracting Syngenta's actual gross profits and incremental costs from its hypothetical gross profits, Dr. Wilner found that but for Willowood's infringement, Syngenta lost \$36,010,000. *Id.* at 75 lns.9-12, 76 lns.17-18.

Syngenta actually lost exclusivity, were roughly equal to its actual gross profits in 2014 and 2015, when Syngenta effectively lost exclusivity. *Id.*; Doc. 221 at 51:19-52:5.

b. Admissibility

Despite his heavy reliance on the non-azoxystrobin fungicides benchmark,¹⁷ Dr. Wilner provided scant analysis for how or why non-azoxystrobin fungicides provide “a proper benchmark” for azoxystrobin. *See* Doc. 149-1 at 38. His only explanation consists of a single sentence: “[M]y analysis of the damages due to infringement of the ‘138 Patent is based on Syngenta’s gross profits on sales of [non-azoxystrobin fungicides], which contain products for which Syngenta maintained exclusivity through 2015.” *Id.* He does not provide any further analysis or explanation of why these non-azoxystrobin fungicides are an appropriate benchmark.¹⁸ Nor has Syngenta directed the Court’s attention to any other evidence in the record that would establish non-azoxystrobin fungicides as an appropriate benchmark. Unlike his explanation of the

¹⁷ Though Dr. Wilner used a different benchmark for 2016-2017, those calculations relied on the hypothetical gross profits from 2015, which were calculated with the non-azoxystrobin fungicides benchmark. *See* Doc. 149-1 at 76 lns.7-10, ln.13. Thus, Dr. Wilner’s entire calculation of damages for the ‘138 Patent is based on the non-azoxystrobin fungicides benchmark.

¹⁸ The beginning of Dr. Wilner’s analysis for the compound patents has two sections, one called “Budgets as a Benchmark” and another called “Mesotrione as a Benchmark.” Doc. 149-1 at 30-32. He did not discuss the non-azoxystrobin fungicides benchmark there, nor is there a corresponding section at the beginning of his analysis for the ‘138 Patent. *See id.* at 37-38. Instead, Dr. Wilner adopted his earlier “Budgets as Benchmarks” discussion. *Id.* at 38. He also explained that mesotrione would be “an over-conservative benchmark,” because mesotrione lost exclusivity in 2014, while the ‘138 Patent did not expire until the end of 2015. *Id.* Dr. Wilner concluded that non-azoxystrobin fungicides provide “a proper benchmark” and briefly explained that Syngenta maintained exclusivity through 2015 for some products in this group. *Id.* His report then begins the year-by-year analysis of gross profits for the ‘138 Patent, and includes no other discussion of non-azoxystrobin fungicides as a benchmark.

mesotrione benchmark, Dr. Wilner does not address potential similarities between non-azoxystrobin fungicides and azoxystrobin fungicides and their markets, such as what crops they protect or whether they are similarly affected by changes in commodity prices. *See id.* at 31-33. Nor did he explain which non-azoxystrobin fungicides retained exclusivity, the nature of the exclusivity, or how far beyond 2015 that exclusivity extended.

Dr. Wilner has not provided “substantial evidence of the similarities between the two products and their markets.” *Ericsson*, 352 F.3d at 1379. Retained exclusivity by some non-azoxystrobin fungicides and the use of azoxystrobin and non-azoxystrobin fungicides to protect crops against fungus does not make the benchmark reliable. Without “sound economic proof of the nature of the market,” Dr. Wilner’s calculations for the hypothetical, non-infringing world lapse “into pure speculation.” *Grain Processing*, 185 F.3d at 1350. Dr. Wilner’s opinions relying on the non-azoxystrobin fungicides benchmark are not based on sufficient facts or reliable principles. *See Fed. R. Evid.* 702. The Court will exclude Dr. Wilner’s opinion on damages for the ‘138 Patent.

In his report, Dr. Wilner asserted that lost profit damages for the ‘138 Patent “would be no less than the amounts calculated...for infringement of the ’076 and ‘256 Patents.” Doc. 149-1 at 37 n.208, 38. While mesotrione was an “over-conservative benchmark” in comparison with non-azoxystrobin fungicides, it was still an apt benchmark for sales of azoxystrobin and, in Dr. Wilner’s opinion, provided a floor for damages for the ‘138 Patent. *See id.* Dr. Wilner may testify that his damages analysis for the compound patents applies to damages for the ‘138 Patent.

Syngenta asserts that Dr. Wilner's choice of non-azoxystrobin fungicides as a benchmark rather than mesotrione, *see id.* at 38, provides a sufficient foundation for its use as a benchmark. However, the lack of a better comparison does not justify the use of a poor benchmark. *See Crystal*, 246 F.3d at 1358-59 (affirming that benchmark of similar technology was unreliable because of important differences in the products' markets); *cf. Eleven Line, Inc. v. N. Tex. State Soccer Ass'n*, 213 F.3d 198, 208-09 (5th Cir. 2000) (reversing award of damages in antitrust case based on benchmark analysis when "the only evidence of comparability" was the plaintiff's common ownership of other indoor soccer arenas).

3. The '761 Patent

a. Dr. Wilner's Calculations

Dr. Wilner again used non-azoxystrobin fungicides as a benchmark to calculate hypothetical gross profits for the '761 Patent. Doc. 149-1 at 41-42. For 2014 and 2015, he used the same calculation for the '761 Patent as he did for the '138 Patent. *Id.* at 42. He then calculated damages for 2016 and 2017 with the same method.

b. Admissibility

Dr. Wilner's opinions on lost profit damages for the '761 Patent are inadmissible for two reasons. First, Dr. Wilner's use of the non-azoxystrobin fungicides benchmark lacks a sufficient basis. Neither he nor Syngenta has provided evidence of the similarities between non-azoxystrobin fungicides and azoxystrobin fungicides or their markets, nor has he explained why or how non-azoxystrobin fungicides provide a reliable benchmark. *Supra* pp. 17-18. Second, Dr. Wilner did not address but-for causation, or whether there

were non-infringing alternatives, for the '761 Patent. Moreover, his assumption of but-for causation contradicts other information in his report.

To obtain lost profit damages, the patentee must show that but for the infringement, the patentee would have made those profits. *See Ericsson*, 352 F.3d at 1378 (requiring patentee to show “that ‘but for’ infringement, it would have sold its product at a higher price”); *Panduit*, 575 F.2d at 1156 (requiring an absence of acceptable non-infringing substitutes for lost sales). Non-infringing products or processes “available or on the market at the time of infringement” might otherwise account for the patentee’s lost profits, breaking the causal link between infringement and lost profits. *Grain Processing*, 185 F.3d at 1349 (quotation omitted). “[S]ubstitutes only theoretically possible” do not preclude lost profit damages. *Id.* at 1353; *see also Minn. Mining & Mfg. Co. v. Johnson & Johnson Orthopaedics, Inc.*, 976 F.2d 1559, 1578 (Fed. Cir. 1992) (upholding absence of non-infringing substitutes when alternative source only produced products below commercially acceptable standards).

At the beginning of his damages analysis for the '761 Patent, Dr. Wilner concluded that “Syngenta meets the first three *Panduit* factors for the '761 Patent,” adopting his earlier analysis on the compound and '138 patents. Doc. 149-1 at 41.¹⁹ For the compound patents, Dr. Wilner found that other potential sources for azoxystrobin were actually “Syngenta-based private label[s],” participated in another market, such as

¹⁹ Dr. Wilner cited sections IV.A.1-3 and III.B of his report. Doc. 149-1 at 41. However, from context, Dr. Wilner meant sections IV.A.1-3 and IV.B. *See id.* at 28-30, 37-38.

the seed care sector, or targeted different segments of the market, such as particular customers, geographies or crops. *Id.* at 29. Based on this information, Dr. Wilner concluded that but for Willowood's infringing products, customers would have bought Syngenta's azoxystrobin. *Id.* For the '138 Patent, Dr. Wilner further stated that he knew of no way that azoxystrobin "could have been economically manufactured without the method of the '138 Patent." *Id.* at 38. Dr. Wilner provided no additional analysis or findings for the '761 Patent.

However, there is an obvious non-infringing substitute for the '761 Patent: the '138 Patent. The process claimed by the '138 Patent undisputedly provides a method capable of producing azoxystrobin without infringing the '761 Patent. Doc. 159-2 at 66:14-67:6. Syngenta's long-standing and successful use of the '138 Patent's claimed method shows that it is a viable alternative to the '761 Patent. *See* Doc. 149-1 at 6, 8; Doc. 159-2 at 101:20-102:3, 193:2-:14.

Dr. Wilner's report also states that Syngenta expected some generic competition by 2014, after the expiration of the compound patents, suggesting that there are non-infringing alternatives to both the '138 and '761 patents. *See* Doc. 149-1 at 15, 38. In his calculations of lost profits, Dr. Wilner used benchmarks with the same exclusivity status as the compound and '138 patents, indicating that he expected competition to enter the market when those patents expired, despite the '761 Patent's continued enforceability. *See id.* at 31-32, 38.

Because Dr. Wilner did not address how these non-infringing alternatives affected lost profit damages for the '761 Patent, he has not shown the but-for causation necessary

to prove lost profits. *See Ericsson*, 352 F.3d at 1378; *Grain Processing*, 185 F.3d at 1349; *Panduit*, 575 F.2d at 1156. The Court will exclude Dr. Wilner's opinion on damages for the '761 Patent as speculative and unreliable because they are based on the non-azoxystrobin fungicides benchmark and because they do not account for acceptable non-infringing substitutes. *See Fed. R. Evid. 702; Daubert*, 509 U.S. at 589.

Syngenta asserts that it met its burden to show but-for causation because there were no products on the market using azoxystrobin made without the '761 Patent's claimed process. However, non-infringing alternatives are not limited to products on the market, but extend to alternative, non-infringing methods of manufacture available to the defendant. *See Grain Processing*, 185 F.3d at 1349, 1353-54 (finding non-infringing alternative process was available when the infringer could have obtained the necessary materials and had the necessary equipment, know-how, and experience).

In his report, Dr. Wilner opined that, "[e]ven if a generic was able to manufacture azoxystrobin without the '761 Patent, lost profit damages would be no less than the amounts calculated...for infringement of the '076 and '256 Patents." Doc. 149-1 at 41 n.215. Because Dr. Wilner's calculations for the compound patents used a benchmark with the same exclusivity, the calculations assume non-infringing alternatives for the later expiring patents. Dr. Wilner asserted that his calculation of head-start damages for the compound patents provided a floor for damages on the '761 Patent, just as they did for the '138 Patent. Dr. Wilner may testify that his damages analysis for the compound patents applies to damages for the '761 Patent.

IV. Formulators' Exemption

The Formulators' Exemption provides expedited EPA registration to applicants using a registered pesticide from another producer to formulate their own pesticides. 7 U.S.C. § 136a(c)(2)(D); 40 C.F.R. § 152.85. In 2013, Willowood used the Formulators' Exemption to register its azoxystrobin fungicides with the EPA. Doc. 149-1 at 10; Doc. 1-16. It has already been determined that Willowood infringed the compound patents to obtain the formulation that it submitted to the EPA. Doc. 141 at 4, 6. Willowood began to sell azoxystrobin shortly after receiving approval in 2014. *See* Doc. 149-1 at 11, 13; Docs. 164-26, 164-27.

In his report, Dr. Wilner asserted that without Willowood's infringement and use of the Formulators' Exemption, Willowood would not have obtained EPA approval so quickly and would not have been able to sell azoxystrobin "as early as it did." Doc. 149-1 at 10-11; *see* Doc. 167-2 at 41:22-43:15 (noting six- to nine-month benefit of Formulators' Exemption); Doc. 167-4 at 40:20-:25 (noting initial registration process takes a minimum of two years). Dr. Wilner based his lost profits calculations on this "head start" in the market. *See* Doc. 149-1 at 10-11, 25-26. Willowood's actions seeking expedited approval and a quick entry into the market are relevant to Dr. Wilner's theory of head-start damages. *See id.* at 25, 36. To the extent he testifies on Willowood's early entry into the market, the Court will admit his testimony.

Dr. Wilner also asserted that Willowood misused the Formulators' Exemption. He did not offer an opinion on such misuse, but relied on documents showing that Willowood initially told the EPA that it used azoxystrobin from Syngenta, *see* Docs. 53-4

to 53-7, and later admitted that it had not obtained its azoxystrobin from Syngenta. Doc. 12 at ¶ 48 (admitting allegations in Doc. 1 at ¶ 48); Doc. 33 at ¶ 48 (same). Dr. Wilner does not appear to have personal knowledge of Willowood's registration process and any testimony by Dr. Wilner on Willowood's alleged misuse would likely be hearsay. Finally, neither Dr. Wilner nor Syngenta explain how Willowood's alleged misuse of the Formulators' Exemption affects Dr. Wilner's lost profits analysis. The Court will exclude any testimony by Dr. Wilner on whether or not Willowood misused the Formulators' Exemption.

The Court's decision to exclude Dr. Wilner from testifying on this alleged misuse does not affect Syngenta's ability to offer other evidence on whether Willowood improperly used the Formulators' Exemption. Willowood's motion is not directed to any evidence other than Dr. Wilner's testimony and thus the larger question is not properly before the Court. Evidence that Willowood intentionally infringed as part of a scheme to obtain early entry into the market may inform both the jury's finding on willfulness and the Court's decision on whether to enhance damages. Doc. 1 at p. 27 (seeking treble damages for Willowood's willful infringement); *see* 35 U.S.C. § 284; *Halo Elecs., Inc. v. Pulse Elecs., Inc.*, 136 S. Ct. 1923, 1931-32 (2016). However, it may raise Rule 403 issues of confusion or undue delay. Fed. R. Evid. 403. A motion in limine has been filed addressed to this issue, and the Court will not resolve it here.

V. Conclusion

Dr. Wilner's calculation of lost profits using one benchmark to adjust another to create a hypothetical, non-infringing market has not yet been addressed by the courts, but

the Court concludes it can be a reliable method if the benchmarks are appropriate. He provided sufficient facts and data to support his use of Syngenta's budgets, past gross profits, and mesotrione as benchmarks. The Court will admit his opinion on damages for the compound patents. In his damages calculations for the '138 and '761 Patents, Dr. Wilner did not support his choice of non-azoxystrobin fungicides as a benchmark with sufficient facts or data. Nor did he adequately consider non-infringing alternatives for the '761 Patent. Consequently, the Court will exclude his opinions on damages for the '138 and '761 patents.

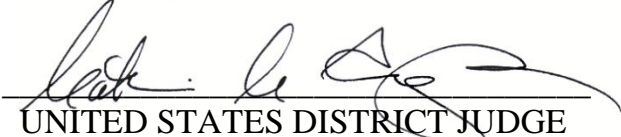
The Court will admit Dr. Wilner's testimony on Willowood's early entry into the market because it is relevant to his theory of damages. The Court will exclude his testimony on Willowood's alleged misuse of the Formulators' Exemption because it is not relevant to his calculation of damages, nor is he competent to testify on the subject.

It is **ORDERED** that the Willowood's motion to exclude the testimony of Dr. Benjamin Wilner, Doc. 147, is **GRANTED in part and DENIED in part** as follows:

1. The Court denies the motion as to Dr. Wilner's calculation of lost profits on the '076 and '256 patents.
2. Dr. Wilner may also rely on his calculation of damages for the '076 and '256 patents to discuss damages for the '138 and '761 patents.
3. The Court otherwise grants the motion as to Dr. Wilner's calculation of lost profits for the '138 and '761 patents.

4. The Court grants the motion to exclude as to Dr. Wilner's testimony on whether Willowood misused the Formulators' Exemption, but otherwise denies the motion as to his testimony on Willowood's early entry into the market.
5. The Court denies the motion as moot as to Dr. Wilner's opinion on copyright damages.

This the 20th day of July, 2017.


UNITED STATES DISTRICT JUDGE