[Cite as *Winner Bros., L.L.C. v. Seitz Elec., Inc.*, 182 Ohio App.3d 388, 2009-Ohio-2316.]

IN THE COURT OF APPEALS OF OHIO
SECOND APPELLATE DISTRICT
DARKE COUNTY

WINNER BROTHERS, L.L.C., et al.,	:	
	:	Appellate Case No. 1740
Appellants,	:	
	:	Trial Court Case No. 2006-CV-62987
v.	:	
	:	(Civil Appeal from
SEITZ ELECTRIC, INC.,	:	Common Pleas Court)
	:	
Appellee.	:	
	:	

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O P I N I O N

Rendered on the 15th day of May, 2009.

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Ricketts Co., L.P.A., and Charles H. Lease, for appellants.

Utrecht & Young, L.L.C., and James D. Utrecht, for appellee.

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WALTERS, Judge.

{¶ 1} Plaintiffs-appellants, Winner Brothers, L.L.C., and Four Star Dairy ("Winner"), appeal from a summary judgment rendered in favor of Seitz Electric, Inc. ("Seitz"). Winner contends that the trial court erred in granting summary judgment because there were genuine issues of material fact regarding its breach-of-contract claim. Winner also contends that the trial court erred in granting a motion in limine that limited the testimony of Winner's expert and precluded Winner from establishing proximate cause and damages on its negligence claim. Finally, Winner contends that

the trial court erred in denying its motion to strike the testimony of Seitz's expert.

{¶ 2} We conclude that the trial court erred in limiting the testimony of Winner's expert, because there is legitimate disagreement about the scientific theory involved in the case, i.e., the extent of stray voltage required to adversely affect milk production in cows. Accordingly, the trial court erred when it weighed the evidence and gave preclusive effect to certain scientific studies. Consequently, the trial court also erred in rendering summary judgment on behalf of Seitz, because the evidence and the testimony of Winner's expert, when admitted, establishes genuine issues of material fact regarding the claims against Seitz. Finally, the trial court erred in overruling Winner's motion to limit the testimony of the defense expert. In rendering an opinion about stray voltage and its effect on animals and milk production, the defense expert relied wholly on scientific literature and was simply a conduit for the out-of-court statements of others. Accordingly, the judgment of the trial court is reversed, and this cause is remanded for further proceedings.

{¶ 3} In 1997, Winner and Seitz entered into a contract for electrical wiring to be installed in a new freestall dairy barn that Winner was building. Winner wanted to ultimately increase the size of its herd from about 200 to 1,200 Holstein cows. The barn was ready after October 1997, and Winner began adding cows. When Winner first started in the new facility, the cows milked well, but production never recovered after the hot summer of 1998. Winner consulted with five nutritionists to determine why the cows were not producing enough milk. In a normal herd, 75% of the cows should produce over 100 pounds of milk per day. However, Winner was lucky to have ten or 12 cows producing at that level. Winner also experienced problems with breeding.

{¶ 4} Winner experimented with the nutritionists' various suggestions for several years, but nothing really changed. These suggestions included feeding the cows more grain, lengthening the preparation time for milking (more massaging before the milking process began), removing some grain and substituting more fiber, and some changes in how the cows were being handled.

{¶ 5} The final group of nutritionists was from Land O' Lakes. One of these experts indicated that the Winner cows should be drinking 30 gallons of water per day, but they were not. Milk production was also dropping significantly at about 200 days after the cows gave birth. One of the Land O' Lakes experts matched Winner's data with data from 80 other herds and could find no explanation for these problems. After placing the question on the Internet, the expert received a response from a Pennsylvania State University professor, who suggested that the problem could be caused by stray voltage.

{¶ 6} Stray voltage is a small amount of voltage that can be measured between two contact points. If an animal comes into contact with these points, current will flow and can cause a response in the animal, depending on the amount of voltage and the resistance involved.

{¶ 7} After being alerted to this potential issue, Winner asked Buschur Electric Company to check for stray voltage in the spring of 2004. Buschur employees found that the freestall barn was not grounded at the main service box on the south side of the building (also referred to as the "backboard").

{¶ 8} In a barn of this type, there is no plumbing other than a water supply system, and the barn sits on a concrete pad. Water comes from a well to the pump

house and is transported down the south side of the barn via two-inch PVC pipe. The pipe comes up out of the ground through the concrete pad. At that point, plastic water hoses are spliced to the pipe and are attached to a steel watering trough. As the cows drink and the water level goes down, the trough fills back up. The barn contained 16 stainless-steel watering troughs.

{¶ 9} After discovering that the main service box was not grounded, Buschur's general superintendent, Byron Bomholt, put in a ground rod and tested the voltage with a"Fluke" voltage meter. The meter showed .9 to 1.0 volts of electricity from the steel in the barn to the ground rod. Bomholt concluded that this was a high amount of voltage. Bomholt also found that the pump house was not grounded, either. After both locations were grounded and bonding was done, the reading on the water line in the pump house was .2, and the reading on the water fountain in the barn was also .2. Bomholt indicated that ideally, he would like zero voltage, but he considered these amounts acceptable.

{¶ 10} Following these repairs, milk production increased about 13 pounds per cow per day for about six weeks, or until July 2004. After that, production was steady for a bit and then began to slowly decrease. In October 2004, Winner asked Bomholt to come back out to check the voltage. At that time, Bomholt obtained a reading on the Fluke meter of .78 volts on the water line from the ground to the pump, because the pump was going bad. After Bomholt replaced the pump, he then obtained a reading of .54 volts.

{¶ 11} After the pump replacement, milk production went up a bit, but not the way it had after the previous repairs. Subsequently, at Winner's request, Dayton Power and Light Co. ("DP&L"), placed a blocker on its neutral, which should have eliminated more

voltage. However, even after DP&L put on the blocker, the stray voltage was not entirely eliminated and stayed between .2 and .4 volts. Milk production also did not improve between that time and when the dairy herd and farm were sold in November 2006.

{¶ 12} In May 2006, Winner filed suit against Seitz, alleging negligence, breach of contract, breach of express and implied warranties that Seitz's work would be done in accordance with industry standards, and tortious interference with business relations. In an amended complaint, Winner alleged that it had sustained $5,433,600 in damages.

{¶ 13} During the discovery process, Winner identified Gerald Bodman as a voltage expert, and Seitz identified several experts, including Mike Wald, of Investigative Engineering, Inc. ("IEI"). In September 2007, Seitz filed a motion in limine, seeking to preclude Winner from offering opinion testimony linking any alleged stray voltage to claims of lost milk production. The basis for the motion was the lack of support in scientific literature for finding a causal connection between less than one volt of electrical current and reduced milk production. The motion was supported by Wald's investigation report. In the report, Wald noted that the maximum level of stray voltage shown at the dairy barn was one volt or less. Wald further observed as follows:

{¶ 14} "A review of the academic and industry literature on the subject of stray voltage at dairy farms revealed that while there has been significant research and testing on the effects of stray voltage, and specifically on milk production, not a single study has even suggested that the voltage levels documented at this barn (1 volt or less) could possibly cause a reduction in milk production. In fact, there have been specific studies showing that voltage levels many times higher than those which may have been

present in this facility do not cause any negative effects."

{¶ 15} Also attached to the motion was United States Department of Agriculture and Agricultural Research Service ("USDA") Agricultural Handbook No. 696, "Effect of Electrical Voltage/Current on Farm Animals." This handbook was published in 1991 and is referred to in the industry as the "Redbook." In addition, Seitz submitted a 1995 study by the University of Wisconsin, an undated article on Michigan Stray Voltage Protocols, and a 2003 article written about stray voltage by a professor at the University of Wisconsin. This latter article indicated that the Public Service Commission of Wisconsin had identified one volt measured across a 500 ohm resistor as a level above which action should be taken.

{¶ 16} Winner's response included an affidavit from Gerald Bodman, who is a licensed professional agricultural engineer, as well as scientific articles and papers dated between 1982 and 1997. Bodman indicated that he had conducted extraneous-voltage investigations on over 1,000 farms, representing over 100,000 cows, in 22 to 27 states, and had served as an expert witness in at least 13 cases dealing with stray voltage. Bodman stated that he had conducted applied research on farms, in "real world" situations approximating conditions in the Winner freestall barn, where the soles of the cows' feet are in direct contact with manure. Bodman criticized the Redbook as unrepresentative of mainstream science as set out in the published literature and as being simply the opinion of a few authors who had appeared numerous times on behalf of utility companies.

{¶ 17} According to Bodman, the defense argument was also flawed because it failed to distinguish between the effects of voltage and current. Voltage is the "force"

that drives current through the resistance of the body of the cow. In contrast to humans, cows have much less resistance, with an average of 361 ohms from the mouth to the feet. Based on studies from 1982 to 1985, Bodman concluded that the Redbook had provided false information and had contradicted peer-reviewed literature when it stated that " 'the worst case' for cow plus contact resistance is 500 ohms." Bodman further stated that:

{¶ 18} "Given these numbers [regarding resistance], the 0.85 volts reportedly found in the Winner barn is sufficient to potentially subject at least some cows to upwards of 4+ milliamps (mA) and the majority of the cows to more than 2 mA. My experience is that as little as 1 mA will adversely affect the majority of cows in a herd. My own experience on my farm with my dairy heifers is that as little as 0.080 mA is sufficient to significantly reduce, if not stop, water intake by cows, which will significantly reduce the cow's milk production.

{¶ 19} "It is a common strategy in the dairy industry to cause a cow to cease milk production to withhold water from her. In as little as three days, the milk production of most cows is almost stopped. We use this strategy to cause a cessation of milk production when we are trying to dry a cow up in preparation for her next lactation.

{¶ 20} "Based upon a Missouri study that when a single point of measurement to represent the cows' feet is used, as Mr. Bomholt did in this case and is customary in the field, the voltage [sic] which a cow would be exposed is actually underestimated by a factor of 1.4. Thus, the voltage to which the Winner cows were exposed was more likely about 1.4 x 0.85 or 1.2 volts."

{¶ 21} Like the defense expert, Bodman had visited the Winner farm and had

access to the repairs Bomholt made between 2004 and 2006. Bodman stated that Seitz had not properly bonded or grounded the freestall barn, and had violated the National Electrical Code ("NEC"). Bodman concluded that these violations proximately caused the cows on Winner's farm "to be shocked with enough electrical current to cause them to reduce their intake of water, which in turn would cause the reduction in milk production."

{¶ 22} In response, Seitz pointed out that the literature upon which Bodman had relied was 15 to 20 years old. Seitz contended that the court should use more recent research. Seitz also attached a 2005 research paper published in Transactions of the ASAE, a publication of the American Society of Agricultural Engineers. The study concluded that "while behavioral modification may occur in a small percentage of animals at exposures of 1 to 2 mA (steady RMS), changes in health and production would not be expected." Reinemann, Stetson, Laughlin, LeMire, Water, Feed, and Milk Production Response of Dairy Cattle Exposed to Transient Currents, 48 Transactions of the ASAE, Vol. 48(1) 385, 391.

{¶ 23} In December 2007, the trial court granted Seitz's motion in limine. The court concluded that Bodman was qualified to testify as an expert, but rejected his proposed opinion on the amount of voltage required to negatively affect milk production. The court noted that stray voltage and its effect on milk production is a controversial topic, and there is no apparent consensus among experts. However, the court gave "greater weight" to the more recent literature, which states that stray voltage may not need to be remedied until a 2.0 volt threshold is reached and that even the application of 4 volts causes production problems in only a small percentage of cows. The court,

therefore, found that Bodman's expert opinions were not based on objectively verifiable or widely accepted scientific principles.

{¶ 24} Following the liminal decision, Seitz filed a motion for summary judgment, incorporating the content of its motion in limine and arguing that the voltage measurements taken on the farm were harmless as a matter of law. In addition, the motion was supported by the testimony of defense expert Michael Wald. Winner subsequently moved to strike Wald's testimony, contending that Wald was not qualified to render any opinion on stray voltage and its effect on cows. Winner also replied to the summary-judgment motion and submitted additional scientific articles to support Bodman's testimony that the voltage was sufficient to affect milk production.

{¶ 25} The trial court overruled Winner's motion in limine and then rendered summary judgment on Seitz's behalf. The court concluded that without Bodman's testimony, Winner could not present a case to the jury that would meet its burden of persuasion and proof. Winner appeals from the trial court's judgment, setting forth three assignments of error for our review.

First Assignment of Error

{¶ 26} "The trial court erred when it granted defendant's motion for summary judgment as their [sic] remained genuine issues of material fact to be decided."

{¶ 27} In this assignment of error, Winner contends first that exclusion of expert testimony had no bearing on the breach-of-contract claim for the cost of repairing the electrical system installed by Seitz. Second, Winner contends that there were genuine issues of material fact, because the court's limitation of Bodman's testimony on the proximate-cause issue was incorrect. Winner also argues that expert testimony is not

needed, because lay persons understand the fact that electricity injures, even at low levels.

{¶ 28} "A trial court may grant a moving party summary judgment pursuant to Civ.R. 56 if there are no genuine issues of material fact remaining to be litigated, the moving party is entitled to judgment as a matter of law, and reasonable minds can come to only one conclusion, and that conclusion is adverse to the nonmoving party, who is entitled to have the evidence construed most strongly in his favor." *Smith v. Five Rivers MetroParks* (1999), 134 Ohio App.3d 754, 760, 732 N.E.2d 422. "We review decisions granting summary judgment de novo, which means that we apply the same standards as the trial court." *GNFH, Inc. v. W. Am. Ins. Co.*, 172 Ohio App.3d 127, 2007-Ohio-2722, 873 N.E.2d 345, ¶ 16.

{¶ 29} As a preliminary matter, we agree with Winner that the trial court erred in granting summary judgment on the breach-of-contract claim. The complaint alleged that Seitz was hired to install electrical wiring and had breached the contract by failing to ground the dairy barn and by defectively wiring the well pump. These actions were allegedly in violation of the NEC. A copy of the contract, in the amount of $38,459, was attached to the complaint.

{¶ 30} Randy Winner, one of the owners of Four Star and Winner Brothers, testified that Seitz Electric had been hired to design and construct the electrical system for the new dairy barn. When Buschur Electric repaired the system in May 2004, various deficiencies and violations of the NEC were found, including the failure to ground the main service or backboard at the freestall barn and failure to ground the pump house. Buschur made repairs to the property and corrected the code violations.

Winner's expert, Bodman, who was a professional engineer and well versed in electrical matters, testified that Seitz's electrical work was not bonded and grounded and did not conform to minimum standards required in the industry and community for electricians wiring a freestall barn.

{¶ 31} "The essential elements of a cause of action for breach of contract are the existence of a contract, performance by the plaintiff, breach by the defendant and resulting damage to the plaintiff." *Flaim v. Med. College of Ohio*, Franklin App. No. 04AP-1131, 2005-Ohio-1515, ¶ 12. "A contract to perform work imposes on the contractor the duty to perform in a workmanlike manner. * * * ' "Workmanlike manner" has been defined as the way work is customarily done by other contractors in the community.' * * * Where a contractor fails to perform in a workmanlike manner, the proper measure of damages is the cost to repair the damage to the condition contemplated by the parties at the time of the contract." (Citations omitted.) *River Oaks Homes, Inc. v. Twin Vinyl, Inc.*, Lake App. No. 2007-L-117, 2008-Ohio-4301, ¶ 29.

{¶ 32} Based on the factual materials submitted, there are genuine issues of material fact with regard to whether Seitz breached its contract with Winner by failing to perform the electrical work in a workmanlike manner. Accordingly, the trial court erred in granting summary judgment on the breach-of-contract claim and the breach-of-warranty claims.

{¶ 33} The rest of Winner's argument regarding this assignment of error pertains to the admissibility of Bodman's voltage theory and will be addressed during our discussion of the second assignment of error. For reasons that will be explained below, we conclude that the trial court also erred in granting summary judgment on the

negligence claims against Seitz. Accordingly, Winner's first assignment of error is sustained.

Second Assignment of Error

{¶ 34} "The trial court erred when it granted defendant's motion in limine, which is incorporated into the trial court's award of summary judgment."

{¶ 35} In this assignment of error, Winner contends that the trial court improperly invaded the jury's province by weighing existing scientific evidence and deciding which evidence would be more reliable. The trial court reviewed the competing stray-voltage theories and decided that a threshold level of 2.0 volts is required before milk production is negatively affected. The court, therefore, precluded Bodman from testifying to the contrary. Since none of the alleged stray voltage exceeded 1.0 volt, Winner would be unable to prove its claim for lost milk production.

{¶ 36} "[A]dmission or exclusion of relevant evidence rests within the sound discretion of the trial court." *State v. Haines*, 112 Ohio St.3d 393, 2006-Ohio-6711, 860 N.E.2d 91, ¶ 50. We review evidentiary decisions for abuse of discretion, which means that the trial court must have acted arbitrarily, unreasonably, or unconscionably. Decisions may be unreasonable, however, if they lack a sound reasoning process. *AAAA Ents., Inc. v. River Place Community Urban Redevelopment Corp.* (1990), 50 Ohio St.3d 157, 161, 553 N.E.2d 597.

{¶ 37} Evid.R. 702 provides generally that witnesses may testify as experts if all the following apply:

{¶ 38} "(A) The witness' testimony either relates to matters beyond the knowledge

or experience possessed by lay persons or dispels a misconception common among lay persons;

{¶ 39} "(B) The witness is qualified as an expert by specialized knowledge, skill, experience, training, or education regarding the subject matter of the testimony;

{¶ 40} "(C) The witness' testimony is based on reliable scientific, technical, or other specialized information. To the extent that the testimony reports the result of a procedure, test, or experiment, the testimony is reliable only if all of the following apply:

{¶ 41} "(1) The theory upon which the procedure, test, or experiment is based is objectively verifiable or is validly derived from widely accepted knowledge, facts, or principles;

{¶ 42} "(2) The design of the procedure, test, or experiment reliably implements the theory;

{¶ 43} "(3) The particular procedure, test, or experiment was conducted in a way that will yield an accurate result."

{¶ 44} In *Daubert v. Merrell Dow Pharmaceuticals* (1993), 509 U.S. 579, 589, 113 S.Ct. 2786, 125 L.Ed.2d 469, the United States Supreme Court concluded that trial judges are responsible under Fed.R.Evid. 702 for ensuring that scientific testimony is not only relevant but reliable. The Ohio Supreme Court subsequently adopted this role for Ohio trial court judges. See *Miller v. Bike Athletic Co.* (1998), 80 Ohio St.3d 607, 616, 687 N.E.2d 735, and *Terry v. Caputo*, 115 Ohio St.3d 351, 2007-Ohio-5023, 875 N.E.2d 72, ¶ 16-26.

{¶ 45} The Ohio Supreme Court has described the trial court's role as a "gatekeeping function," which "imposes an obligation upon a trial court to assess both

the reliability of an expert's methodology and the relevance of any testimony offered before permitting the expert to testify." *Terry*, 115 Ohio St.3d 351, 2007-Ohio-5023, 875 N.E.2d 72, ¶ 24. After the trial court rules on admissibility, its decision is reviewed for abuse of discretion. *Miller*, 80 Ohio St.3d at 616, 687 N.E.2d 735. Furthermore, although the trial court's discretion is not unlimited, appellate courts cannot substitute their judgment for that of the trial court. *Valentine v. Conrad*, 110 Ohio St.3d 42, 2006-Ohio-3561, 850 N.E.2d 683, ¶ 9.

{¶ 46} In *Terry*, the Ohio Supreme Court stressed that:

{¶ 47} "The test for reliability requires an assessment of the validity of the expert's methodology, by applying with flexibility several factors set forth in *Daubert*. * * * The trial court should first assess whether the method or theory relied upon has been tested. * * * Next, it should consider whether the theory has been the subject of peer review, and then whether the method has a known or potential error rate * * * Finally, *Daubert* instructs trial courts to look at whether the theory has gained general acceptance in the scientific community * * * None of these factors, of course, is dispositive of the inquiry, and when gauging the reliability of a given expert's testimony, trial courts should focus 'solely on principles and methodology, not on the conclusions' generated." (Citations omitted.) 115 Ohio St.3d 351, 2007-Ohio-5023, 875 N.E.2d 72, ¶ 25.

{¶ 48} As was noted, the trial court concluded that Bodman was qualified to testify as an expert, but rejected his proposed opinion on the amount of voltage required to negatively affect milk production. The trial court noted that stray voltage and its effect on milk production is a controversial topic, and there is no apparent consensus among experts. However, the court gave greater weight to the more recent literature, which

states that stray voltage may not need to be remedied until a 2.0 volt threshold is reached, and that even the application of 4 volts causes production problems in only a small percentage of cows. In particular, the court was more persuaded by literature promulgated in 1991 by the USDA: the "Redbook." Accordingly, the court found that Bodman's expert opinions were not based on objectively verifiable or widely accepted scientific principles.

{¶ 49} Winner notes that it provided the trial court with 38 publications and treatises that address the "level of concern" for stray voltage, i.e., publications that show the level of some effect on cows and milk production at below one volt. Winner further notes that 14 of these articles are more recent than the 1991 USDA Redbook.

{¶ 50} "Stray voltage is a phenomenon in which voltage returning to the ground after powering an appliance is able to pass through an object not intended as a conductor." *Siewert v. N. States Power Co.* (Minn.App. 2008), 757 N.W.2d 909, 913. The phenomenon has been explained as follows:

{¶ 51} "In order to understand stray voltage or neutral-to-earth voltage, one must first understand the neutral-grounded network. All electricity leaving an electrical substation must return to that substation in order to complete a circuit. Unless that circuit is completed, electricity will not flow. The current leaves the substation on a high voltage line which eventually connects to some electrical 'appliance.' After exiting the 'appliance' that current must return to the substation. The neutral-grounded network provides the returning current two choices. Either it can return via the neutral line, which accounts for the second wire on our electrical poles, or it can return through the ground. These two pathways comprise the grounded-neutral network. Electricity flows through

the path of lowest resistance. If there exists more resistance in the neutral line than in the ground, the current will flow through the ground to return to the substation. Neutral-to-earth voltage or stray voltage will occur when current moves from either the neutral line to the ground or from the ground to the neutral line. It uses a cow as a pathway if that animal happens to bridge the gap between the two. A cow's hooves provide an excellent contact to the earth while standing on wet concrete or mud, while at the same time the cow is contacting the grounded-neutral system consisting of items such as metal stanchions, stalls, feeders, milkers, and waterers. The current simply uses the cow as a pathway in its eventual return to the substation. Apparently very slight voltages can affect cattle. Evidence [has] suggested anything greater than one volt can be catastrophic to a dairy farm." *Larson v. Williams Elec. Co-op., Inc.* (N.D. 1995), 534 N.W.2d 1, fn. 1.

{¶ 52} Several states have addressed the issue of stray voltage and have adopted regulations requiring preventative measures. For example, Idaho has a detailed set of requirements adopted pursuant to Idaho's Stray Current and Voltage Remediation Act, which was enacted in 2005. See Idaho Code 61-803. The legislative findings accompanying Idaho's act state as follows:

{¶ 53} "The legislature also finds that the potential impact of stray current or voltage on dairy cows is a matter of interest and concern to dairy producers with dairies situated near and served by a multi-grounded wye electrical distribution system, which is the type of distribution system used by utilities in this state. Scientific research has established a level of stray current or voltage, at or below which no effect on a dairy cow's behavior, health or milk production has been shown. To provide for the

continued, safe and efficient availability of electricity while addressing complaints regarding stray current or voltage, it is necessary and appropriate to: establish a uniform preventive action level; establish uniform procedures and protocols for measurements of stray current or voltage; require, when necessary, that the sources of stray current or voltage be identified; require, when necessary, adequate remediation; and establish procedures for handling complaints." Idaho Code 61-801.

{¶ 54} Idaho's Stray Voltage and Remediation Act does not define the level below which current has no effect on milk production. However, Idaho's act and the regulations passed pursuant to the act define what is referred to as a "preventative action level" ("PAL"). When the utility's share of the PAL exceeds 50% of the PAL, the utility is required to initiate remedial procedures within five days that reduce the voltage attributable to the utility's distribution system to 50 percent or less of the preventative action level. Idaho Code 61-804.

{¶ 55} The PAL is defined as "stray current or voltage that is either:

{¶ 56} "(a) A steady-state, root mean square (rms), alternating current (AC) of 2.0 milliamp (mA) or more through a 500 ohm resistor connected between cow contact points, as measured by a true rms meter; or

{¶ 57} "(b) A steady-state, rms, AC voltage of 1.0 volts or more, across (in parallel with) a 500 ohm resistor connected between cow contact points, as measured by a true rms meter." Idaho Code 61-802(4).

{¶ 58} Idaho has also devised detailed administrative procedures to deal with these issues. See Idaho Adm.Code 31.61.02.010 through 31.61.02.092. These definitions and remediation requirements imply that stray current of 2.0 mA or more, or

1.0 volts or more, is capable of causing injury to cattle. If not, there would be no reason to require remediation, particularly within such a short time frame.

{¶ 59} Michigan uses a similar preventive action level, defined as "a steady state animal contact current that meets or exceeds 2 milliamperes RMS using a nominal 500 ohms resistor at 60 Hz from all sources, including off-premises and on-premises sources." Michigan Adm.Code R. 460.2701(n).

{¶ 60} In the present case, Bodman testified as follows:

{¶ 61} "[T]he .085 volts reportedly found in the Winner barn is sufficient to potentially subject at least some cows to upwards of 4+ milliamps (mA) and the majority of the cows to 2mA. My experience is that as little as 1 mA will adversely affect the majority of cows in a herd. My own experience on my farm with my dairy heifers is that as little as 0.080 mA is sufficient to significantly reduce if not stop water intake by dairy heifers. If they were lactating cows, the reduced water intake would significantly reduce milk production." Thus, the current was above what Michigan and Idaho have identified as preventative action levels and what Idaho has said requires very prompt remediation.

{¶ 62} In *Hoffmann v. Wisconsin Elec. Power Co.*, 262 Wis.2d 264, 2003-WI-64, 664 N.W.2d 55, the plaintiffs sued the Wisconsin Electric Power Company ("WEPCO"), alleging that the distribution system was causing excessive amounts of electrical current to flow through their farm and was damaging the health and productivity of the livestock. 2003-Wis-64, ¶ 7. In 1995, WEPCO tested the system and concluded that the current level was below the Wisconsin Public Service Commission's ("PSC's") existing "level of concern." This level of concern has been defined as "the level above which corrective or mitigative action should be taken if production or behavioral problems exist, which is one

milliampere in the 'cow contact' areas." Id. at ¶ 5. Despite this fact, a jury found in favor of the plaintiffs. Id. at ¶ 7. On appeal, the Wisconsin Supreme Court refused to be bound by the PSC's findings in the "cow contact" protocol as to harm caused by stray voltage. Id. at ¶ 11-14.[1] The court, therefore, concluded that WEPCO could be held liable even if there were no cow contact measurements that exceeded one milliampere. Id.

{¶ 63} In *Hoffmann*, the court also noted that the plaintiffs had presented the theory that nontraditional stray voltage was harming the herd and that "traditional stray voltage is not the only kind of electrical current that can harm animals." *Hoffmann,* 262 Wis.2d 264, 2003-WI-64, 664 N.W.2d 55, ¶ 14. The court concluded that the "entire evidentiary picture" was sufficient to sustain the verdict, even though the PSC findings were inconclusive about the effect of nontraditional stray voltage on cows. Id. at ¶ 22. This evidentiary picture included testimony from experts about the effect of ground current or nontraditional stray voltage. Id. at ¶ 17. In addition, the court noted that:

{¶ 64} "The Hoffmann's [sic] expert witnesses also disputed studies introduced at

[1]The "level of concern" in Wisconsin was increased to two milliamperes in 1996. See *Muth v. Wisconsin Elec. Co.* (WI.App.2006), 293 Wis.2d 361, 2006 WI App 101, 715 N.W.2d 240, at ¶ 10, n. 1. See also Public Service Commission of Wisconsin, PSC Stray Voltage Data Update: Phase I and Phase II Combined Database Summary (Jan. 26, 2006), p. 35, at http://psc.wi.gov/utilityinfo/electric/newsInfo/document/strayVoltage/svUpdate2006.pdf. According to the Wisconsin PSC, "[t]he 'level of concern' is not a damage level. Instead, it is a very conservative, pre-injury level, below the point where moderate avoidance behavior in the animals is likely to occur and well below where a cow's behavior or milk production would be harmed. The 'level of concern' is further broken down into two parts. The first part is a 1-milliAmp contribution from the utility, at which level mitigative action must be taken by that utility to reduce its contribution to below the 1-milliAmp level. The second part is a 1-milliAmp contribution from the farm system, at which level mitigative action should be voluntarily taken by the farmer." Id. This standard differs from those of Idaho and Michigan, and as was noted, the courts in Wisconsin do not consider themselves bound by this assessment.

trial by WEPCO's expert witnesses regarding the effect of electricity on cows. The Hoffmann's [sic] expert witnesses testified that there is a significant difference between controlled laboratory studies, where cows are exposed to electricity for only short periods of time, and constant, long-term exposure to electrical currents, which is what the Hoffmanns contended that their cows had experienced.

{¶ 65} " * * *

{¶ 66} "In addition, the Hoffmanns themselves testified regarding their extensive efforts to address the problems with their dairy herd, which were largely to no avail. The Hoffmanns, with the assistance of their herd veterinarian and nutritionist, explored and exhausted possible causes of the poor health and reduced milk production of their cows, and ultimately concluded that electricity was the only source that had not been eliminated." Id. at ¶ 18-21.

{¶ 67} In *Muth v. Wisconsin Elec. Power Co.* (W.I.App.2006), 293 Wis.2d 361, 2006 WI App. 101, 715 N.W.2d 240, the plaintiffs sued WEPCO and were awarded damages, based on stray voltage that had allegedly affected their dairy herd. 2006 WI App. 101, at ¶ 1-2. When the plaintiffs had asked WEPCO to investigate stray-voltage problems, the utility performed some testing and installed an isolator on the farm. However, WEPCO took the position that no other action was necessary because the level of stray voltage was less than one milliampere. Id. at ¶ 7. In affirming the judgment for the plaintiffs, the court of appeals relied on *Hoffmann*, noting that "a utility may be [held] liable for negligence for damages caused by stray voltage even when no measurements exceed one milliampere." *Muth* at ¶ 11. The court went on to note that

in any event, the record in the case provided evidence of both stray voltage in excess of one milliampere and defects in the utility's system and distribution. Id. at ¶ 13. Accordingly, the court concluded that the jury could reasonably find that WEPCO's negligence caused harm and damage to the plaintiffs. Id. at ¶ 22.

{¶ 68} Subsequently, in *Gumz v. N. States Power Co.*, 305 Wis.2d 263, 2007-WI-135, 742 N.W.2d 271, the Wisconsin Supreme Court affirmed a jury verdict for plaintiffs in a stray-voltage case. 2007-WI-135, ¶ 1-4 and 21. As in the cases just discussed, the utility tested the plaintiffs' dairy farm and found voltage that was below the "level of concern." Id. at ¶ 15 and 17. In fact, the utility tested twice, in 1996 and 1999, and found on both occasions that voltage was below the level of concern. Id.[2]

{¶ 69} The plaintiffs' expert testified that "exposure to stray voltage had a substantial adverse effect on the herd's production." Id. at ¶ 19. In contrast, the defense expert concluded that the alleged damages were the result of a variety of factors, including poor herd management and nutrition. Id. at ¶ 20. On appeal, the Wisconsin Supreme Court affirmed.

{¶ 70} On appeal, the Wisconsin Supreme Court rejected the defense contention that it could not be held liable for damages caused by its system without notice of a problem. Id. at ¶ 74-77. The court observed that the utility's argument was inconsistent with prior cases, where "utilities were found liable for damages caused by stray voltage,

[2]In 1996, the plaintiffs' expert found "much higher [voltage levels] flowing onto the farm" by using different testing equipment. However, the Wisconsin Supreme court did not specify either the type of equipment or the voltage level that was discovered. *Gumz*, 2007-WL-135, at ¶ 15. Subsequently, when the voltage was tested again in 1999, there is no indication that either the defense or the plaintiffs' expert found voltage above the level of concern. Id. at ¶ 17.

even though the utilities did not know that stray voltage from their systems was causing damage to the plaintiffs." Id. at ¶ 78. One of the cases cited by the court during this discussion was *Allen v. Wisconsin Pub. Serv. Corp.*, 279 Wis.2d 488, 2005 WI App. 40, 694 N.W.2d 420.

{¶ 71} In *Allen*, both the plaintiff and defense experts found current measuring less than one milliampere on the plaintiff's farm. 2005 WI App. 40, ¶ 27. The jury determined that stray voltage from the utility's distribution system caused harm to the dairy farm, and that the utility's negligence had caused the harm.

{¶ 72} On appeal, the court of appeals affirmed the jury verdict, finding, among other things, that the nuisance award was not excessive in light of the plaintiff's "experience ultimately leading to finding the source of his herd's problems." Id. at ¶ 23. The court observed that the plaintiff had endeavored for years to discover the source of his problems and had called the utility to his farm on multiple occasions to test for stray voltage, but had been told "he did not have a problem or that the problem was on his farm and not a result of WPS's [the utility's] electrical system." Id. Accordingly, the court concluded that the award was justified. Id.

{¶ 73} In considering the plaintiff's cross appeal for treble damages, which could have been awarded if the utility's conduct had been wanton, willful, or reckless, the court of appeals commented that:

{¶ 74} "WPS points to studies by the United States Department of Agriculture and by state agencies such as the Public Service Commission of Wisconsin, which regulates WPS, that discuss an electric current's effect on dairy cattle. These sources agree that current below four milliamperes has no adverse affect on dairy cows. The USDA has

determined that cows do not perceive electricity below one milliampere, and voltage at that level does not affect milk production. Both WPS's and Allen's experts found current measuring less than one milliampere on Allen's farm. WPS cannot be faulted for following plausible science when it concluded there was no problem. Consequently, Allen has not shown that WPS acted willfully, wantonly or recklessly. Thus the trial court did not err in denying Allen's request for treble damages." Id. at ¶ 26-27.

{¶ 75} Notably, the court's comment that the science upon which WPS relied is "plausible" does not mean that it is the only science possible. The above authorities demonstrate that there is dispute about the extent of stray voltage required to adversely affect milk production and that recovery has been permitted in recent cases, even where the tested current is less than one milliampere. While the Wisconsin Public Service Commission takes one viewpoint, that is not the only possible conclusion, and even Wisconsin courts have refused to give preclusive effect to the agency's determination.

{¶ 76} Accordingly, the trial court erred in its reasoning process and therefore abused its discretion when it weighed the evidence and gave preclusive effect to certain studies. "A court should not focus on whether the expert opinion is correct or whether the testimony satisfies the proponent's burden of proof at trial. * * * Moreover, evidence should not be excluded merely because it is questionable or confusing, since the experts' opinions would be subject to cross-examination and the credibility of their conclusions left to the trier of fact." (Citations omitted.) *Gilmore v. Village Green Mgt. Co.,* 178 Ohio App.3d 294, 2008-Ohio-4566, 897 N.E.2d 1142, 1146, ¶ 27.

{¶ 77} Based on the preceding discussion, we conclude that the trial court erred in restricting Bodman's testimony. Furthermore, when Bodman's testimony is

considered, genuine issues of material fact exist that preclude summary judgment.

{¶ 78} "It is fundamental that in order to establish a cause of action for negligence, the plaintiff must show (1) the existence of a duty, (2) a breach of duty, and (3) an injury proximately resulting therefrom." *Armstrong v. Best Buy Co., Inc*., 99 Ohio St.3d 79, 2003-Ohio-2573, 788 N.E.2d 1088, ¶ 8. As we noted, Bodman testified that Seitz failed to properly ground or bond the freestall barn and thus violated the NEC. Bodman concluded that these violations proximately caused the cows on the Winner farm to be shocked with enough electrical current to cause them to reduce their intake of water, which in turn caused the reduction in milk production. Accordingly, there were genuine issues of material fact with regard to whether Seitz's alleged negligence proximately caused injury to Winner's dairy business.

{¶ 79} We should note that Seitz devotes a substantial portion, if not all, of its brief, to the argument that a lack of grounding did not cause the stray-voltage problem, and to disputing Bodman's substantive conclusions. However, these are arguments that bear on the weight or credibility to be given the evidence, not its admissibility. "When reviewing a motion for summary judgment, a court must be careful not to weigh the evidence or judge the credibility of witnesses. * * * Instead, it must consider all of the evidence and reasonable inferences that can be drawn from the evidentiary materials in favor of the nonmoving party." (Citations omitted.) *Cox v. Barsplice Prods., Inc*. (June 15, 2001), Greene App. No. 2001-CA-1, 2001 WL 669336, * 1.

{¶ 80} As a final matter, we note that Winner also contends that expert testimony is not even required in stray-voltage cases. In this regard, Winner relies on a decision by the Iowa Supreme Court, which rejected the requirement of expert testimony in stray-

voltage cases. See *Schlader v. Interstate Power Co.* (Iowa, 1999), 591 N.W.2d 10, 14. In *Schlader*, the Iowa Supreme Court stated as follows.

{¶ 81} "The subject of stray voltage is certainly technical. But the nature of electricity and the results of contact with it by humans and animals is not beyond a common person's understanding. We reject IPC's [the defendant's] contention that expert testimony is required in a stray-voltage case."

{¶ 82} We note the opinion of the Iowa Supreme Court, but need not address the matter further, in view of our conclusion that the trial court erred in limiting the testimony of Gerald Bodman.

{¶ 83} Based on the preceding discussion, the second assignment of error is sustained.

Third Assignment of Error

{¶ 84} "The trial court erred when it denied plaintiff's motion to strike and/or limine defendant's expert Mike Wald's testimony."

{¶ 85} Under this assignment of error, Winner contends that the trial court erred in considering the testimony of defense expert, Mike Wald, because Wald was not qualified to render an opinion. Winner points out that this was Wald's first stray-voltage case and was Wald's first case involving levels of voltage that are harmful to animals. In addition, Winner notes that Wald had no direct knowledge or expertise about inappropriate levels of stray voltage and its affect on cows. Instead, Wald simply "surfed" the Internet and read articles to formulate his opinion.

{¶ 86} "The determination of the admissibility of expert testimony is within the

discretion of the trial court. * * * Such decisions will not be disturbed absent abuse of discretion. * * * 'Abuse of discretion' suggests unreasonableness, arbitrariness, or unconscionability." *Valentine,* 110 Ohio St.3d 42, 2006-Ohio-3561, 850 N.E.2d 683, ¶ 9.

{¶ 87} In *Beard v. Meridia Huron Hosp*., 106 Ohio St.3d 237, 2005-Ohio-4787, 834 N.E.2d 323, the Ohio Supreme Court stated that:

{¶ 88} "Because works of professional literature contain statements that if introduced as evidence would fall within the definition of hearsay, and because the Ohio Rules of Evidence, unlike the Federal Rules of Evidence, do not contain a learned-treatise exception to the hearsay rule, such works 'are inadmissible as independent evidence of the theories and opinions therein expressed.' * * * *Piotrowski v. Corey Hosp*. (1961), 172 Ohio St. 61, 69, 15 O.O.2d 126, 173 N.E.2d 355. In *Piotrowski*, we noted that the reasons for exclusion include the inability to verify the validity of the opinions and conclusions within the works and the lack of opportunity to cross-examine the authors of those opinions and conclusions. * * * If, during direct examination, a witness were permitted to offer statements from professional literature to prove the truth of the matter asserted in those statements, the witness would be acting as a conduit for the out-of-court statements of the authors of those literary works." *Beard,* 2005-Ohio-4787, ¶ 23.

{¶ 89} Nonetheless, the Ohio Supreme Court concluded in *Beard* that an expert's opinion is admissible, when the expert relies, in part, on professional literature in forming his opinion. The court observed that:

{¶ 90} "There is a difference between a witness's referring to specific statements in professional literature as substantive evidence and an expert witness's referring to the

literature as being part of the basis for that expert's opinion. While the former reference would be inadmissible hearsay, numerous courts in Ohio have held * * * that the latter reference is admissible. We agree with the decisions in those cases.

{¶ 91} "Our decision is consistent with the Ohio Rules of Evidence. Evid.R. 702(B) provides that a 'witness is qualified as an expert by specialized knowledge, skill, experience, training, or education regarding the subject matter of the testimony.' Pursuant to this rule, a witness becomes qualified to testify as an expert by virtue of the fact that he or she has been exposed to and has absorbed information from sources that may not be admissible under the Rules of Evidence. Evid.R. 703 states that an expert witness may base his or her opinion on facts or data 'perceived by him or admitted in evidence at the hearing.' However, we have acknowledged that information that would not be admissible at trial may serve as a basis for an expert's background knowledge without violating Evid.R. 703. * * * Moreover, Evid.R. 706, the rule that permits impeachment with statements from learned treatises, is based on the premise that experts are likely to rely on professional literature in forming their opinions. Cf. *Stinson v. England* (1994), 69 Ohio St.3d 451, 633 N.E.2d 532, paragraph two of the syllabus (holding that 'the substance of [a] treatise may be employed only to impeach the credibility of an expert witness who has relied upon the treatise * * * or has acknowledged its authoritative nature').

{¶ 92} "Experts have been permitted to testify regarding the information that provides the basis for their opinions. * * * Because experts are permitted to base their opinions on their education, including their review of professional literature, training, and experience, it follows that experts are also permitted to testify regarding that information.

Accordingly, we hold that expert witnesses are permitted to testify that their opinions are based, in part, on their review of professional literature." (Citations omitted.) *Beard,* 106 Ohio St.3d 237, 2005-Ohio-4787, 834 N.E.2d 323, ¶ 24-26.

{¶ 93} The defense expert, Wald, is the sole proprietor of a consulting company that provides consulting services relating to failures of electrical equipment. Wald has bachelor's and master's degrees in electrical engineering and has been employed as an expert in approximately 3,000 cases. Wald testified in his deposition that he had worked on other cases involving electrical equipment on farms, but none involving stray voltage. Wald further stated that he had to conduct research regarding levels of voltage that would be harmful to animals. He did that basically through the Internet and just looked up articles about livestock being affected by voltage. This was the first case Wald had encountered for which he had to look into what levels of voltage would be harmful to animals. Wald testified that he was not necessarily an expert when it came to the effect of stray voltage on cows. He stated that he was relying on the scientific research. Specifically, the following exchange occurred during Wald's deposition:

{¶ 94} "Q. So everything that you know has come from an article of some scientist or some researcher or some university official relating to stray voltage on cows?

{¶ 95} "A. Absolutely."

{¶ 96} Wald also stated that he was not qualified to answer whether stray voltage or direct current can create secondary problems that have a greater impact on the production of milk than the current itself.

{¶ 97} In declining to strike Wald's testimony, the trial court simply stated that the motion to strike was being overruled because Wald's testimony appeared "to be

supported by the literature, reasoning, methodology, and other materials that are scientifically valid."

{¶ 98} We conclude that the trial court erred in failing to consider whether Wald's opinion about the required levels of stray voltage was based wholly on the literature and whether Wald improperly acted as "a conduit for the out-of-court statements of others." *Beard*, 106 Ohio St.3d 237, 2005-Ohio-4787, 834 N.E.2d 323, ¶ 33.

{¶ 99} In *Beard*, the Ohio Supreme Court expressed concern over this type of situation when discussing the testimony of the defendant-appellant doctor, who had expressed a medical opinion that he had complied with the standard of care for deciding whether to operate on a patient with a low blood count. The Ohio Supreme Court concluded that the doctor's first statement in this context was proper because the doctor had said only that his medical opinion was consistent with medical literature, without citing any statements from the literature. Id. at ¶ 28. However, the court then discussed a second statement of the doctor that was more problematic. In this regard, the court noted that:

{¶ 100} "Appellant subsequently testified that, in his expert opinion, he had met the standard of care in taking Moss to surgery with a white-blood-cell count of 2,300. His counsel asked him to explain the basis for his opinion, and appellant replied:

{¶ 101} " 'A. That opinion is based on the fact that the medical and surgical literature states that patients who have benign familial neutropenia can be operated on safely with white blood cell counts greater than a thousand.'

{¶ 102} "This second reference is more problematic than the first because by answering 'the * * * literature states that * * *,' appellant was apparently offering a

statement from the literature. However, appellant did not offer precise statements from the literature so that they might be considered independently to prove compliance with the standard of care in Moss's case. Instead, he merely referred to statements in the medical and surgical literature while explaining the basis for his previously articulated opinion that he had met the standard of care in Moss's case. Moreover, he clarified that he was referring, generally, to statements from 'various review articles in the medical as well as surgical literature,' that the literature provided only a partial basis for his opinion, and that his opinion was also based on his education, training, and experience. Pursuant to the Ohio Rules of Evidence, appellant is permitted to testify in this manner." *Beard,* 2005-Ohio-4787, at 30-32.

{¶ 103} In contrast, Wald's report makes statements based specifically and solely on scientific literature. For example, the report states that:

{¶ 104} "A review of the academic and industry literature on the subject of stray voltage at dairy farms revealed that while there has been significant research and testing on the effects of stray voltage, and specifically on milk production, not a single study has even suggested that the voltage levels documented at this barn (1 volt or less), could possibly cause a reduction in milk production." Wald's report then goes on to cite facts from three specific pieces of literature. Likewise, Wald's affidavit, submitted in support of the Seitz motion for summary judgment, appears to express opinions that are simply conduits for out-of-court statements of others.

{¶ 105} Accordingly, the trial court's reliance on Wald's testimony, at least regarding the effect of stray voltage on cows and the level of voltage required to cause damage to milk production, is not based on a sound reasoning process. The trial court,

therefore, abused its discretion in relying on this testimony.

{¶ 106} Based on the preceding discussion, the third assignment of error is sustained.

{¶ 107} All of Winner's assignments of error having been sustained, the judgment of the trial court is reversed, and this cause is remanded for further proceedings.

Judgment reversed

and cause remanded.

FAIN and WOLFF, JJ., concur.

WILLIAM H. WOLFF JR., J., retired, of the Second District Court of Appeals, sitting by assignment.

SUMNER E. WALTERS, J., retired, of the Third District Court of Appeals, sitting by assignment.

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