Journal of Environmental and Sustainability Law

Missouri Environmental Law and Policy Review
Volume 18
Issue 2 *Spring 2011*

Article 7

2011

Attempting to (De)Regulate Genetically Modified Crops: The Supreme Court Overrules the Injunction Denying Deregulation of Roundup Ready Alfafa. Monsanto v. Geertson Seed Farms

Christine K. Lesicko

Attempting to (De)Regulate Genetically Modified Crops: The Supreme Court Overrules the Injunction Denying Deregulation of Roundup Ready Alfalfa

Monsanto v. Geertson Seed Farms[1]

I. INTRODUCTION

The development of genetically modified crops has been touted as beneficial in part because of the crops' positive reaction to "safer" bioherbicides.[2] This can lead to larger crop yields and lower the use of traditional, more toxic herbicides. There have also been plenty of concerns about modified crops, including cross-contamination with conventional and organic crops and potential long-term environmental impacts.[3] The National Environmental Protection Act ("NEPA")[4] addresses these concerns by requiring the federal government to prepare an environmental impact statement ("EIS") whenever a proposed action might significantly impact the environment.[5] The Plant Protection Act ("PPA") seeks to regulate genetically modified crops via NEPA by classifying them as regulated articles that could pose an environmental risk.[6]

In order to deregulate[7] a genetically modified crop, the Animal and Plant Health Inspection Service ("APHIS") must assess environmental

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[1] 130 S. Ct. 2743 (2010).

[2] *See Genetically Modified Foods and Organisms*, HUMAN GENOME PROJECT INFORMATION, *available at* http://www.ornl.gov/sci/techresources/Human_Genome/elsi/gmfood.shtml (last visited Aug. 31, 2011).

[3] *Id.*

[4] 42 U.S.C. §§ 4321–4347 (2006).

[5] *Monsanto*, 130 S. Ct. at 2749–50.

[6] *Id.*

[7] Deregulation means that APHIS has determined the new crop poses no threat to agriculture and can be commercialized by the creator. ANIMAL & PLANT HEALTH INSPECTION SERV., U.S. DEP'T OF AGRIC., BRS FACTSHEET 2 (2006), http://www.aphis.usda.gov/publications/biotechnology/content/printable_version/BRS_FS_biodereg_02-06.pdf.

impact by preparing one of two documents, either an environmental assessment or an EIS.[8] In the case of Monsanto's genetically altered crop Roundup Ready Alfalfa, the United States District Court for the Northern District of California found that APHIS violated NEPA by not preparing an environmental impact statement ("EIS") and the court ordered APHIS to do so.[9] In addition, the court vacated APHIS's complete deregulation of Roundup Ready Alfalfa and entered an injunction preventing future action by APHIS while the agency prepared an EIS.[10] On appeal, the United States Court of Appeals for the Ninth Circuit upheld the district court's findings.[11] On grant of certiorari, the United States Supreme Court reversed and remanded the decision of the lower courts, finding the district court abused its discretion in denying APHIS the right to deregulate Roundup Ready Alfalfa and in prohibiting the possibility of future planting and harvesting of Roundup Ready Alfalfa.[12]

II. FACTS AND HOLDING

This case stems from the complete deregulation of Roundup Ready Alfalfa by APHIS.[13] After the District Court for the Northern District of California vacated APHIS's decision to deregulate the alfalfa and enjoined future sales and planting of the crop and the United States Court of Appeals for the Ninth Circuit affirmed, the United States Supreme Court reversed and remanded.[14]

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[8] NEPA requires the preparation of an environmental assessment or an EIS in order to determine whether a proposed action will have an impact on the environment. 42 U.S.C. § 4332(2)(c) (2006).

[9] Geertson Seed Farms v. Johanns, 570 F.3d 1130, 1135 (9th Cir. 2009), *rev'd*, 130 S. Ct. 2743 (2010).

[10] *Id.* at 1136.

[11] *Id.* at 1141.

[12] Monsanto v. Geertson Seed Farms, 130 S. Ct. 2743, 2761 (2010).

[13] Deregulation is important because a regulated article cannot be imported, exported, or moved in interstate commerce except if authorized by a special permit. *See* 7 U.S.C. § 7711(a) (2006).

[14] *Monsanto*, 130 S. Ct. at 2749.

In 2004, Monsanto Company ("Monsanto")[15] requested two strains of its genetically modified Roundup Ready Alfalfa be deregulated by APHIS.[16] Under the Plant Protection Act ("PPA")[17], the Secretary of the United States Department of Agriculture ("USDA") may issue regulations to prevent the introduction or dissemination of plant pests in the United States.[18] As delegated by the Secretary, APHIS, a division of the USDA, controls regulations governing plant pests.[19] Genetically engineered plants are considered plant pests until APHIS determines otherwise.[20] APHIS classified Roundup Ready Alfalfa as a regulated article prior to the deregulation request made by Monsanto.[21]

APHIS can grant a petition to deregulate a genetically engineered plant variety by determining that the plant variety does not present a plant pest risk.[22] In doing so, APHIS must comply with NEPA.[23] NEPA requires federal agencies to prepare an EIS for each federal action significantly affecting the environment.[24] However, if APHIS finds while preparing a shorter environmental assessment that there are no significant environmental issues, then there is no need for the agency to complete a formal EIS.[25]

APHIS prepared a draft environmental assessment and published a notice in the Federal Register soliciting comments from the public[26] about

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[15] Monsanto is a manufacturer of chemical products including the well-known herbicide Roundup. Geertson Seed Farms v. Johanns, 570 F.3d 1130, 1133 (9th Cir. 2009). In the 1990s, the company developed a variety of alfalfa that would be tolerant to glyphosate, which is the main ingredient in Roundup. *Id.* at 1134.

[16] *Monsanto*, 130 S. Ct. at 2750.

[17] 7 U.S.C. §§ 7701–7786.

[18] *Monsanto*, 130 S. Ct. at 2749 (quoting 7 U.S.C. § 7711(a)).

[19] *Id.* (citing 7 C.F.R. §§ 2.22(a), 2.80(a)(36) (2010)).

[20] *Id.* at 2749–50 (quoting 7 C.F.R. §§ 340.0(a)(2) n.1, 340.1, 340.2, 340.6).

[21] *Id.* at 2750.

[22] *Id.* (citing 7 U.S.C. § 7711(c)(2) and 7 C.F.R. § 340.6).

[23] *Id.*

[24] *Id.* (quoting 42 U.S.C. § 4332(2)(C) (2006)).

[25] *Id.* (citing 40 C.F.R. §§ 1508.9(a), 1508.13 (2009)).

[26] After APHIS receives a petition for deregulation from an organization, it publishes a notice in the Federal Register that allows for a sixty-day comment period. 7 C.F.R. § 340.6(d)(2). During the comment period, anyone may submit written comments regarding the petition. *Id.*

the deregulation of the modified alfalfa.[27] After considering the comments, APHIS found that the alfalfa did not pose any significant impact on the environment and decided to completely deregulate it.[28] Eight months later, two conventional alfalfa farmers and environmental groups concerned with food safety (collectively, "Respondents") initiated this action in the United States District Court for the Northern District of California challenging APHIS's decision to completely deregulate Roundup Ready Alfalfa.[29] Monsanto and its licensee, Forage Genetics International ("FGI"),[30] intervened in the lawsuit on the side of APHIS.[31]

The district court accepted APHIS's determination that the modified alfalfa did not have any harmful health effects for humans, but found that APHIS violated NEPA by not preparing an EIS before completely deregulating the alfalfa.[32] After making these findings, the court requested that the parties submit proposed judgments of their preferred remedy for the NEPA violation.[33] APHIS proposed that the court vacate the agency's complete deregulation of Roundup Ready Alfalfa, require the agency to complete an EIS and permit the planting of the alfalfa pending completion of the EIS, subject to six restrictions.[34]

The district court rejected APHIS's proposed judgment and entered a preliminary injunction prohibiting almost all future planting of Roundup

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[27] *Monsanto*, 130 S. Ct. at 2750.

[28] *Id.* Prior to its decision to deregulate, APHIS authorized almost 300 field trials of Roundup Ready Alfalfa over a period of eight years. *Id.*

[29] *Id.* at 2750–51. Respondents did not seek preliminary injunctive relief, therefore Roundup Ready Alfalfa had non-regulated status for almost two years. *Id.* at 2751. During those two years, more than 3000 farmers planted around 220,000 acres of Roundup Ready Alfalfa. *Id.*

[30] FGI is the exclusive developer of Roundup Ready Alfalfa seed per a license agreement with Monsanto. *Id.* at 2750.

[31] *Id.* at 2751.

[32] *Id.*

[33] *Id.*

[34] *Id.* The restrictions included mandatory isolation distances between modified alfalfa-planted fields and non-genetically-engineered fields; mandatory harvesting conditions; a requirement that planting and harvesting equipment be cleaned after contact with Roundup Ready Alfalfa; identification and handling requirements for modified alfalfa seed; and a requirement that all Roundup Ready Alfalfa seed producers and growers be under contract with Monsanto or FGI in order to require compliance with the other restrictions imposed by the judgment. *Id.*

Ready Alfalfa pending APHIS's completion of an EIS.[35] The court then entered a permanent injunction against the sale and use of Roundup Ready Alfalfa.[36]

On appeal, APHIS, Monsanto and FGI (collectively, "Appellants") did not argue the existence of a NEPA violation. Instead, Appellants argued that the district court erred in granting overly broad injunctive relief[37] and in declining to hold an evidentiary hearing prior to entering the injunction.[38] The United States Court of Appeals for the Ninth Circuit affirmed the district court's decision, holding that the district court did not abuse its discretion in granting a permanent injunction and also did not err in refusing to hold an evidentiary hearing.[39]

Ninth Circuit Judge N. Randy Smith dissented with the majority. His dissenting opinion focused on the failure of the lower court to require an evidentiary hearing.[40] In the dissent, Judge Smith wrote that by denying Appellants an evidentiary hearing, the court "creates an altogether new exception to the evidentiary hearing requirement."[41] The judge then distinguished this case from *Idaho Watersheds Project v. Hahn*,[42] stating that in *Idaho Watersheds* the court accepted the agency's recommendations in granting a temporary injunction, while in this case the court rejected APHIS's suggestions and independently found an injunction proper.[43] "The evidentiary hearing requirement is essential because it allows the district court an opportunity to consider the witnesses' credibility in the face of cross examination."[44] Judge Smith wrote that he considered the majority's decision not to grant an evidentiary hearing an

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[35] *Id.*

[36] *Id.* The judgment vacated APHIS's deregulation decision; ordered APHIS to prepare an environmental impact statement; enjoined the planting of genetically modified alfalfa after March 30, 2007 pending completion of the environmental impact statement; and imposed conditions (similar to those proposed by APHIS) on handling and identifying already planted Roundup Ready Alfalfa. *Id.* at 2751–52.

[37] Geertson Seed Farms v. Johanns, 570 F.3d 1130, 1136 (9th Cir. 2009).

[38] *Id.* at 1139.

[39] *Id.* at 1141.

[40] *Id.* at 1141 (Smith, J., dissenting).

[41] *Id.*

[42] 307 F.3d 815 (9th Cir. 2001).

[43] *Geertson*, 570 F.3d at 1142 (Smith, J. dissenting).

[44] *Id.* at 1143.

abuse of discretion and thus had concerns about the scope of the injunction.[45]

In seeking review by the Supreme Court, Appellants argued the district court and appellate court erred in finding an injunction to be the appropriate remedy for a NEPA violation by default.[46] Appellants also continued to argue that both of the lower courts erred in denying Appellants an evidentiary hearing.[47]

Upon review, the United States Supreme Court found that the injunction was improper; therefore, it reversed the decision of the Ninth Circuit and remanded the case for further proceedings consistent with its opinion.[48] The Court determined both parties had standing to continue in the action, but found it unnecessary to address whether injunctive relief was available to Respondents or whether the district court was required to conduct an evidentiary hearing before entering relief.[49] Ultimately, the Supreme Court held that the district court abused its discretion in enjoining APHIS from partially deregulating Roundup Ready Alfalfa by granting relief Respondents had not originally asked for.[50]

III. LEGAL BACKGROUND

A. *National Environmental Policy Act*[51]

NEPA, enacted by Congress in 1969[52] as one of the first environmental laws in the United States, established the environmental

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[45] *Id.*

[46] Monsanto Co. v. Geertson Seed Farms, 130 S. Ct. 2743, 2756 (2010).

[47] *Id.* at 2752.

[48] *Id.* at 2762.

[49] *Id.* at 2761–62.

[50] *Id.* at 2760–61. Respondents instituted the original action to vacate APHIS's complete deregulation of Roundup Ready Alfalfa. By entering the permanent injunction preventing APHIS from taking any action until it completes an environmental impact statement, the court is disallowing APHIS from partially deregulating the alfalfa in the interim, which is not the relief the Respondents initially requested. *Id.*

[51] 42 U.S.C. §§ 4321–4347 (2006).

[52] NEPA was enacted by Congress in 1969 and signed into law by President Richard Nixon on January 1, 1970. *See* COUNCIL ON ENVIRONMENTAL QUALITY, A CITIZENS

policies currently in effect.[53] The purpose of NEPA was to encourage "productive and enjoyable harmony" between people and the environment, to prevent or eliminate damage to the environment and to people's health, to improve the understanding of ecological systems and natural resources and to establish the White House Council on Environmental Quality.[54]

According to the Ninth Circuit, NEPA, as a procedural statute, provides a process "to ensure that federal agencies take a hard look at the environmental consequences of their actions."[55] In order to take a "hard look" at those consequences, NEPA requires an EIS to be prepared for "every recommendation or report on proposals for legislation and other major federal actions significantly affecting the quality of the human environment."[56] NEPA, however, allows for an environmental assessment[57] to be prepared before the preparation of an EIS or instead of an EIS upon a finding of no significant impact.[58]

APHIS is the federal agency with authority to deregulate a genetically engineered plant in compliance with NEPA.[59] Genetically engineered plants are considered regulated articles under the PPA.[60] The Code of Federal Regulations allows any person to submit "a petition to

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GUIDE TO THE NEPA HAVING YOUR VOICE HEARD 2 (2007), http://ceq.hss.doe.gov/nepa/Citizens_Guide_Dec07.pdf.

[53] *Id.*

[54] 42 U.S.C. § 4321.

[55] Neighbors of Cuddy Mountain v. Alexander, 303 F.3d 1059, 1070 (9th Cir. 2002) (quoting Muckleshoot Indian Tribe v. U.S. Forest Serv., 177 F.3d 800, 814 (9th Cir. 1999)).

[56] 42 U.S.C. § 4332(2)(c). An environmental impact statement, according to the statute, is a detailed statement of environmental consequences. *Id.*

[57] An environmental assessment is a concise public document created by a federal agency to provide sufficient evidence for determining whether to prepare an environmental impact statement or to find that a proposal has no environmental impact. 40 C.F.R. § 1508.9. (2010).

[58] *Id.* § 1508.9(a). A finding of no significant impact means the agency has determined that an action "will not have a significant effect on the human environment and for which an environmental impact statement . . . will not be prepared." *Id.* § 1508.13.

[59] Monsanto v. Geertson Seed Farms, 130 S. Ct. 2743, 2750 (2010) (citing 7 U.S.C. § 771(c)(2) (2006) and 7 C.F.R. § 340.6 (2010)).

[60] 7 C.F.R. § 340.1 (2010).

seek a determination that an article should not be regulated."[61] After the petition has been submitted, APHIS must publish a notice in the Federal Register and allow a sixty-day period for public comment.[62] After APHIS reviews the comments, the agency can either "approve the petition in whole or in part," or it can "deny the petition."[63] This process is important because "[a]gency regulations require that public information be of 'high quality' because [a]ccurate scientific analysis, expert agency comments, and *public scrutiny* are essential to implementing NEPA."[64]

B. *Standing*

Under Article III of the United States Constitution, a party must have standing in order to bring an action. For a party to have standing, three elements must be satisfied.[65] First, the plaintiff must establish that it has suffered an "injury-in-fact."[66] An injury-in-fact is one that is both "concrete and particularized"[67] and "actual or imminent."[68] Second, there must be a "causal connection"[69] between the injury and the conduct, and the defendant must have been the cause of that injury.[70] Finally, the plaintiff must show the injury would be redressed by a favorable decision

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[61] *Id.* § 340.6(a). This section of the Code of Federal Regulations also requires the person requesting deregulation to submit a statement, including "copies of scientific literature, copies of unpublished studies, . . . and data from tests performed" to explain why the article should be deregulated. *Id.* § 340.6(b)(A).

[62] *Id.* § 340.6(d). During the comment period, anyone interested in the matter can submit written comments that will become part of the file. *Id.*

[63] *Id.*

[64] Sierra Club v. Bosworth, 510 F.3d 1016, 1030 (9th Cir. 2007) (quoting Idaho Sporting Cong. v. Thomas, 137 F.3d 1146, 1151 (9th Cir. 1998)).

[65] Lujan v. Defenders of Wildlife, 504 U.S. 555, 560 (1992).

[66] *Id.* (citing Allen v. Wright, 468 U.S. 737, 756 (1984)).

[67] Particularized, when used by the court, means that the injury must affect the plaintiff personally or individually. *Id.* at 560 n.1.

[68] *Id.* at 560 (quoting Whitmore v. Arkansas, 495 U.S. 149, 155 (1990)).

[69] The "causal connection" means that the injury and the conduct alleged to have caused the injury must be traceable to the defendant, not the independent actions of a third party not involved in the case. *Id.* (quoting Simon v. E. Ky. Welfare Rights Org., 426 U.S. 26, 41–42 (1976)).

[70] *Id.* (quoting *Simon*, 426 U.S. at 41–42).

by the court.[71] The party seeking federal jurisdiction has the burden of showing the three elements.[72] In order to satisfy the standing requirements in an action where the plaintiff's injury stems from the government's lack of regulation of someone other than the plaintiff, more evidence is generally needed to show the plaintiff can meet the elements of standing because it is more difficult to prove the elements.[73]

In addition to those factors, there is a prudential test for standing. Prudential standing considerations are "judicially self-imposed limits on the exercise of federal jurisdiction," and are "founded in concern about the proper—and properly limited—role of the courts in a democratic society."[74] One of the most employed prudential tests for standing is the "zone of interests" test, which was first used in *Association of Data Processing Service Organizations, Inc. v. Camp*.[75] The "zone of interest" test requirement is "whether the interest sough to be protected by the complainant is arguably within the zone of interests to be protected or regulated by the statute or constitutional guarantee in question."[76]

C. *Evidentiary Hearing*

United States v. Microsoft Corp.[77] states the general rule that a district court must hold an evidentiary hearing prior to issuing injunctive relief unless the adverse party has waived its rights to a hearing or the facts are not in dispute.[78] Generally, this is also the rule in the Ninth Circuit.[79] However, in *Idaho Watersheds*, the Ninth Circuit reasoned that

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[71] *Id.* at 561 (quoting *Simon*, 426 U.S. at 38, 43).

[72] *Id.* (citing FW/PBS, Inc. v. Dallas, 493 U.S. 215, 231 (1990)). Because these elements are considered an "indispensable part of the plaintiff's case," the elements "must be supported in the same way as any other matter on which the plaintiff bears the burden of proof." *Id.*

[73] *Id.* at 561–62.

[74] Bennett v. Spear, 520 U.S. 154, 162 (1997) (quoting Allen v. Right, 468 U.S. 737, 751 (1984) and Warth v. Seldin, 422 U.S. 490, 498 (1975)).

[75] 397 U.S. 150 (1970).

[76] *Id.* at 153.

[77] 253 F.3d 34 (D.C. Cir. 2001).

[78] *Id.* at 101. "Normally, an evidentiary hearing is required before an injunction may be granted." *Id.* (quoting United States v. McGee, 714 F.2d 607, 613 (6th Cir. 1983)).

[79] *See* Charlton v. Estate of Charlton, 841 F.2d 988, 989 (9th Cir. 1988).

"determining what measures are needed through extensive fact intensive inquiry is precisely the purpose of the long term environmental review ordered by the district court."[80] In other words, the Ninth Circuit determined the fact-finding function of the evidentiary hearing would serve the same function as the EIS. The court held an evidentiary hearing was not necessary because the injunction was an interim measure "designed to allow for a process to take place which will determine permanent measures."[81] In addition, the court noted that both "parties [would] have an opportunity to participate in the determination of permanent measures" later.[82]

The parties *in Monsanto* argued about whether the *Microsoft* or the *Idaho Watersheds* precedent controlled. The Ninth Circuit held that an evidentiary hearing was not necessary while Judge Smith's dissent found otherwise. The Supreme Court did not address the necessity of an evidentiary hearing.

D. *Injunctive Relief*

In order to seek injunctive relief, a plaintiff must satisfy a four-factor test.[83] The first factor a plaintiff must demonstrate is that it has suffered an irreparable injury.[84] Next, it must show both (1) that other remedies, such as money damages, are inadequate to compensate for the injury and (2) that injunctive relief is necessary.[85] Finally, the plaintiff must prove the public interest would be served by a permanent injunction.[86] When a plaintiff seeks an injunction in order to remedy a

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[80] Idaho Watersheds Project v. Hahn, 307 F.3d 722, 831 (9th Cir. 2001). The court went on to say that an evidentiary hearing conducted by the district court would duplicate the agency's determination. *Id.*

[81] *Id.*

[82] *Id.*

[83] EBay Inc. v. MercExchange, L.L.C., 547 U.S. 388, 391 (2006).

[84] *Id.* To meet courts' high standard for irreparable injury, the injury must be so imminent that there is a "clear and present" need for an injunction and the injury must be "beyond remediation." Chaplaincy of Full Gospel Churches v. England, 454 F.3d 290, 297 (D.C. Cir. 2006) (quoting Wisc. Gas Co. v. FERC, 758 F.2d 669, 674 (D.C. Cir. 1985)).

[85] *EBay*, 547 U.S. at 391.

[86] *Id.*

NEPA violation, the four-factor test still applies.[87] The Supreme Court has long held that irreparable injury and the inadequacy of legal remedies are the basis for injunctive relief.[88] In addition, courts have found that the factors, plus "the balance of equities and consideration of the public interest," are important in determining whether injunctive relief is appropriate.[89]

In pre-*Winter* decisions, Ninth Circuit precedent held that in a "run of the mill" NEPA case, an injunction is the proper form of relief.[90] Courts often find "the balancing of equities and the public interest favor issuance of an injunction because allowing a potentially environmentally damaging program to proceed without an adequate record of decision runs contrary to the mandate of NEPA."[91] The Ninth Circuit even went so far as to state damage is presumed to be irreparable and an injunction is proper when the injury is caused by an agency failing to "evaluate thoroughly the environmental impact of a proposed action."[92]

In *Winter v. Natural Resources Defense Council*,[93] the United States Navy prepared an environmental assessment to determine whether submarine training exercises had a significant environmental impact.[94] The Navy concluded, after completing an environmental assessment, that its training exercises would not have a significant environmental impact, and therefore determined it did not need to prepare an EIS.[95] Shortly thereafter, environmental organizations sued the Navy seeking injunctive

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[87] *See* Winter v. Natural Res. Def. Council, Inc., 129 S. Ct. 365, 380–82 (2008).

[88] Weinberger v. Romero-Barcelo, 456 U.S. 305, 312 (1982) (citing Rondeau v. Mosinee Paper Corp., 422 U.S. 49, 61 (1975)).

[89] *Winter*, 129 S. Ct. at 381. The difference between the standard for a preliminary injunction and the standard for a permanent injunction is that for a preliminary injunction, the plaintiff must show a likelihood of success on the merits instead of actual success on the merits. *See* Amoco Prod. Co. v. Vill. of Gambell, 480 U.S. 531, 546 n.12 (1987).

[90] Monsanto v. Geertson Seed Farms, 130 S. Ct. 2743, 2750 (2010); Petition for Writ of Certiorari, Monsanto v. Geertson Seed Farms, 130 S. Ct. 2743 (2010) (No. 09-475) 2009. WL 3420495.

[91] Sierra Club v. Bosworth, 510 F.3d 1016, 1033 (9th Cir. 2007).

[92] *Amoco*, 480 U.S. at 541 (quoting People of Vill. of Gambell v. Hodel, 774 F.2d 1414, 1423 (9th Cir. 1985)).

[93] 129 S. Ct. 365 (2008).

[94] *Id.* at 372.

[95] *Id.*

and declaratory relief because the Navy violated NEPA by failing to complete an EIS.[96] The district court granted injunctive relief, enjoining the Navy from certain activities[97] during its training exercises.[98] The court held that the injunction was proper because the environmental organizations had shown a "probability of success" on their claims and had shown a "possibility" of irreparable harm to the environment.[99] The Ninth Circuit Court of Appeals found the injunction overly broad and remanded the decision back to the district court to narrow the injunction.[100] The Navy then moved to vacate the district court's injunction on two of the conditions, which the district court refused to do.[101] The Ninth Circuit affirmed the district court's decision holding that "when a plaintiff demonstrates a strong likelihood of prevailing on the merits, a[n] . . . injunction may be entered based only on a 'possibility' of irreparable harm."[102]

The Supreme Court, on certiorari, found the Ninth Circuit's "possibility" standard to be an inappropriate measure for injunctive relief.[103] The proper standard, according to the Court, is to grant injunctive relief when irreparable injury is likely to occur in the absence of an injunction.[104] The Court went on to reason that some of the harm NEPA seeks to prevent by requiring the completion of an EIS is that without such information, little may be known about possible environmental harms.[105] The Court then held that the four-factor test applies to claims of NEPA violations.[106]

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[96] *Id.*
[97] *Id.* The court prohibited the Navy from using sonar. *Id.*
[98] *Id.*
[99] *Id.* at 372–73.
[100] *Id.* at 373.
[101] *Id.*
[102] *Id.* at 375.
[103] *Id.*
[104] *Id.*
[105] *Id.* at 376.
[106] *Id.* at 381.

IV. INSTANT DECISION

The Supreme Court's evaluation in *Monsanto v. Geertson Seed Farms* turned on three main issues; however, the Court did not discuss whether an evidentiary hearing was required.[107] First, the Court determined both parties had standing: Appellants had standing to seek review of the Ninth Circuit's judgment and Respondents had standing to seek injunctive relief.[108] Second, the Court found the district court did not properly exercise its discretion when it enjoined APHIS's partial deregulation pending the completion of an EIS.[109] Ultimately, the Court held that the district court abused its discretion in granting an injunction prohibiting APHIS from taking further action during the preparation of an EIS and enjoining future planting of the Roundup Ready Alfalfa.[110]

A. *Standing*

Respondents' threshold argument that Monsanto lacked standing to seek the Supreme Court's review of the lower courts' decisions was not persuasive to the Supreme Court.[111] The Supreme Court found that Appellants satisfied all three criteria for standing.[112] The Court reasoned that Appellants were injured by their inability to sell or license the Roundup Ready Alfalfa until APHIS completed the EIS, that the district court's injunction had caused Appellants' injury and that a reversal of the lower courts' decisions would remedy the injury.[113]

In addition, Respondents did not dispute that Appellants would have standing if they had pursued an alternative strategy. Respondents, however, claimed that Monsanto did not have standing because it failed to challenge the lower courts decision to vacate APHIS's deregulation

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[107] Monsanto Co. v. Geertson Seed Farms, 130 S. Ct. 2743, 2752, 2761–62 (2010).
[108] *Id.* at 2756.
[109] *Id.* at 2761.
[110] *Id.*
[111] *Id.* at 2752.
[112] *Id.* "Standing under Article III of the Constitution requires that an injury be concrete, particularized, and actual or imminent; fairly traceable to the challenged action; and redressable by a favorable ruling." *Id.*
[113] *Id.*

decision.[114] Respondents' argument failed for two reasons.[115] First, the Court reasoned that although Appellants did not challenge the vacatur of APHIS's deregulation decision directly, they made an objection that the vacated deregulation decision should have been replaced by APHIS's proposed judgment.[116] Second, the Court argued that there was no reason a partial deregulation could not be implemented if the cause were remanded.[117]

Next, the Court considered Appellants' argument that Respondents lacked standing to seek injunctive relief because the named respondents were not "likely to suffer a constitutionally cognizable" injury if injunctive relief was vacated.[118] The Court, stating that conventional alfalfa farmers are included in the list of named respondents, disagreed with Appellants' argument.[119] The Court went on to reason that a "substantial risk of gene flow injures [the] respondents in several ways."[120] For example, farmers would have to test their conventional crops to ensure they were not contaminated by genetically modified alfalfa in order to market them as

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[114] *Id.*

[115] *Id.* at 2753.

[116] *Id.* APHIS's proposed judgment would have allowed the continued planting of Roundup Ready Alfalfa subject to certain conditions. *Id.*

[117] *Id.* at 2754. The Supreme Court argued that they see no reason why the district court would have to remand the matter to the agency and they also see no reason why APHIS would not issue a new environmental assessment in favor of partial deregulation. According to the Court, APHIS takes the view that a partial deregulation is in the public interest. *Id.*

[118] *Id.* ("[A] plaintiff must demonstrate standing separately for each form of relief sought.") (quoting DaimlerChrysler Corp. v. Cuno, 547 U.S. 332, 352 (2006)).

[119] *Id.* (noting that the district court found that conventional alfalfa farmers established a reasonable probability that their organic and conventional crops would be infected with the modified gene if Roundup Ready Alfalfa was completely deregulated).

[120] *Id.* at 2754–55.

conventional or organic.[121] These harms were sufficiently concrete to satisfy the injury-in-fact prong of standing.[122]

As to the other two prongs of the constitutional standing analysis, the Court found that APHIS's deregulation decision would be the cause of the harms and an order prohibiting the growth and sale of Roundup Ready Alfalfa would remedy the respondents' injuries.[123] In addition, Appellants argued that Respondents failed to satisfy the "zone of interest" test to prudentially determine standing because a risk of commercial harm "is not an interest that NEPA was enacted to address."[124] However, because Respondents' claim had both environmental and economic components, the Court concluded Respondents satisfied the prudential test for standing.[125]

B. *Injunctive Relief*

The district court made efforts to remedy APHIS's NEPA violation in three ways, two of which the Supreme Court addressed in its opinion.[126] The remedies the Court addressed were enjoining APHIS from deregulating Roundup Ready Alfalfa pending completion of the EIS and entering a nationwide injunction prohibiting future planting of modified alfalfa.[127] Appellants argued the lower courts relied on the assumption that an injunction is proper to remedy a NEPA violation; however, the Supreme Court found that an injunction is only proper if the four-factor

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[121] *Id.* Specifically, farmers testified that they face a significant risk of contamination because "[s]ince alfalfa is pollinated by honey, bumble and leafcutter bees, the genetic contamination of the Roundup Ready seed will rapidly spread through the seed growing regions." *Id.* at 2755 (quoting Declaration of Phillip Geertson in Support of Plaintiffs' Motion for Summary Judgment at ¶ 9, Geertson Seed Farms v. Johanns, 439 F. Supp. 2d 1012 (N.D. Cal. 2006) (No. 306CV01075), 2006 WL 5820363).

[122] *Id.* at 2755.

[123] *Id.*

[124] *Id.* at 2755–56 (quoting Bennett v. Spear, 520 U.S. 154, 162–63 (1997)).

[125] *Id.* at 2756.

[126] *Id.* The first way the district court sought to remedy the NEPA violation was by vacating the agency's decision to completely deregulate Roundup Ready Alfalfa. *Id.* Appellants did not argue that vacating the agency's decision was unlawful, so the Court did not address that issue in its opinion. *Id.*

[127] *Id.*

test is satisfied.[128] The four-factor test that must be satisfied before a court can grant a permanent injunction is that a plaintiff must demonstrate: "(1) that it has suffered an irreparable injury; (2) that remedies available at law, such as monetary damages, are inadequate to compensate for that injury; (3) that, considering the balance of hardships between the plaintiff and defendant, a remedy in equity is warranted; and (4) that the public interest would not be disserved by a permanent injunction."[129]

With the district court's order enjoining APHIS from deregulating Roundup Ready Alfalfa even in part, the Court found the district court did not "carve out an exception for planting subsequently authorized by a valid partial deregulation decision."[130] The Court then argued that none of the four factors in the traditional test support the district court's decision to prohibit partial deregulation.[131] Specifically, the Court reasoned, "[u]ntil APHIS actually seeks to effect a partial deregulation, any judicial review of such a decision is premature."[132] Inconsistencies in the district court's judgment form one of the reasons the Court initially determined that the lower court's decision did not satisfy the four-factor test.[133]

In addition, the Court found two reasons why Respondents were unable to show that farmers would suffer irreparable injury if partial deregulation were allowed.[134] The first reason was that if APHIS decided to issue a partial deregulation not conforming to the standards of NEPA,

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[128] *Id.* at 2756–57. The Court noted that the "traditional four-factor test applies when a plaintiff seeks a permanent injunction to remedy a NEPA violation." *Id.* at 2756 (quoting Winter v. Natural Res. Def. Council, Inc., 129 S. Ct. 365, 380–82 (2006)).

[129] *Id.* at 2756 (quoting eBay Inc. v. MercExchange, L.L.C., 547 U.S. 388, 391 (2006)).

[130] *Id.* at 2758.

[131] *Id.* The Court came to this conclusion because Respondents' lawsuit challenged APHIS's *complete* deregulation of Roundup Ready Alfalfa. Appellants did not challenge the vacatur of the complete deregulation decision, and at that point, it was up to the agency to determine if partial deregulation would satisfy statutory and regulatory requirements. If APHIS determined that partial deregulation was proper, any party then aggrieved by the decision could file suit to challenge the *partial* deregulation. *Id.*; *see also* 5 U.S.C. § 702 (2006).

[132] *Monsanto*, 130 S. Ct. at 2758.

[133] *Id.* at 2759 (discussing how the district court attempted to find a middle ground in its decision by rejecting APHIS's proposal to allow continued planting and harvesting of Roundup Ready Alfalfa subject to limitations but not completely banning limited harvesting and planting).

[134] *Id.* at 2759–60.

Respondents could file a new lawsuit challenging the action and seeking appropriate relief.[135] Second, the Court reasoned, "if the scope of the partial deregulation is sufficiently limited, the risk of gene flow to [their/the farmers'] crops could be virtually nonexistent."[136] Since there was no way of knowing whether APHIS would partially deregulate Roundup Ready Alfalfa or not, the lower courts had no right to intervene until that point.[137] Because of those findings, the Court held the district court erred in enjoining a partial deregulation of any kind pending APHIS's preparation of an EIS.[138]

The final issue discussed by the Court was whether the district court erred in issuing a nationwide injunction against further planting of Roundup Ready Alfalfa.[139] The Court found that the district court did err, but it came to that conclusion independent of Appellants' arguments.[140] Because it was inappropriate for the district court to deny the possibility of partial and temporary deregulation, it is also inappropriate to prevent parties from acting in accordance with that decision.[141] The injunction was unnecessary because the vacatur of APHIS's deregulation decision was a sufficient remedy to redress Respondents' injuries.[142] Therefore, the Court reversed and remanded the decision of the lower court, finding the district court abused its discretion in prohibiting the planting and harvesting of Roundup Ready Alfalfa according to the terms of the deregulation.[143]

Justice Stevens's dissent argued that the Court misinterpreted the district court's decision, and regardless, the district court did not abuse its discretion in issuing its orders.[144] Justice Stevens contended that the district court's judgment only addressed deregulation orders "of the kind

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[135] *Id.* at 2760.

[136] *Id.* The Respondents were not a class, therefore, they would be unable to seek a remedy on the ground that the deregulation might cause harm to other parties. *Id.*

[137] *Id.* at 2760–61.

[138] *Id.* at 2761. The Court followed by holding that the court of appeals erred in affirming that part of the district court's judgment. *Id.*

[139] *Id.*

[140] *Id.*

[141] *Id.*

[142] *Id.*

[143] *Id.* at 2761–62.

[144] *Id.* at 2762 (Stevens, J., dissenting).

that spawned this lawsuit" and "the *particular* partial deregulation order proposed . . . by APHIS."[145] The district court was not unreasonable in its discretion and was only exercising its "equitable powers".[146]

First, Stevens argued that the district court's decision was an application of administrative law because the district court was faced with two separate propositions for deregulation.[147] Stevens went on to say that the Court decided those issues by vacating the deregulation that already occurred and stating that NEPA requires an EIS for any future deregulation.[148] Because the district court was concerned with possible gene spreading, and out of that concern wanted to be sure that APHIS would complete an EIS before any partial deregulation decision, Stevens argued that the injunction was not premature.[149] Second, because some Roundup Ready Alfalfa had already been planted and APHIS had limited capacity to monitor planted modified alfalfa, additional planting posed a significant threat.[150] Thus, the dissent maintained that it was not unreasonable for the district court to order the injunction to prevent planting until APHIS completed an EIS that proved that the "known problem of gene flow could, in reality, be prevented."[151]

V. COMMENT

A. *Procedure*

The procedural issues regarding NEPA in this case are important because they practically impact both the creators of genetically modified crops and farmers. Farmers rely on the availability of these crops or on APHIS to make a proper determination that those crops will not negatively impact their own conventional or organic crops. In addition, despite APHIS's initial violation of NEPA procedure, the Supreme Court made the correct decision in finding that the injunction prohibiting APHIS from

[145] *Id.* at 2766.
[146] *Id.* at 2767.
[147] *Id.*
[148] *Id.*
[149] *Id.* at 2769.
[150] *Id.* at 2770.
[151] *Id.* at 2771.

further action before its completion of an EIS was inappropriate. This is because APHIS's purpose is to make the determination of whether an article should be completely or partially deregulated, and an injunction effectively takes that discretion away from the agency.

B. *Genetically Modified Crops in the United States*

1. Overview

The first genetically modified crops sold for commercial use were planted in 1996.[152] In 2009, approximately 14 million farmers planted more than 330 million acres of genetically modified crops in twenty-five different countries.[153] Estimates by the USDA have shown that in the United States, 93% of soybeans, 78% of cotton and 70% of corn planted are genetically modified in some way.[154] The genetic modification of seeds is big business; Monsanto's gross profit in 2010 for seeds and genomics alone was $4.538 billion.[155]

Crops can be genetically modified in different ways. One way to genetically alter a crop involves inserting a gene, called a "transgene," into the crop.[156] Roundup Ready Alfalfa is a crop that has been engineered to be resistant to the herbicide Roundup, which is produced by Monsanto.[157] The active ingredient in Roundup is glyphosate, which is injected into the code of a conventional alfalfa plant.[158] Glyphosate is a gene that occurs

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[152] CLIVE JAMES, THE INTERNATIONAL SERV. FOR THE ACQUISITION OF AGRI-BIOTECH APPLICATIONS, ISAA BRIEF NO. 41-2009: EXECUTIVE SUMMARY (2010), *available at* http://www.isaaa.org/resources/publications/briefs/41/executivesummary/default.asp.

[153] *Id.*

[154] *See* U.S. DEP'T OF AGRIC., ECON. RESEARCH SERV., ADOPTION OF GENETICALLY ENGINEERED CROPS IN THE U.S. (July 1, 2010), *available at* http://www.ers.usda.gov/Data/BiotechCrops/.

[155] MONSANTO, *Fiscal 2010 and Full Year Financial Summary* (Oct. 6, 2010), *available at* http://www.monsanto.com/investors/Documents/2010/10_06_10.pdf.

[156] Brief for Union of Concerned Scientists et al. as Amici Curiae Supporting Respondents at 7–8, Monsanto Co. v. Geertson Seed Farms, 130 S. Ct. 2743 (2010) (No. 09-475), 2010 WL 1393441.

[157] Petition for Writ of Certiorari at 3, Monsanto Co. v. Geertson Seed Farms, 130 S. Ct. 2743 (2010) (No. 09-475), 2009 WL 3420495.

[158] *Id.* at 3–4.

naturally but not in alfalfa.[159] When the gene is inserted into alfalfa, the modified plant will not be harmed when sprayed with Roundup, thus allowing the herbicide to be sprayed over the entire crop to eradicate weeds without damaging the crop.[160] The gene inserted into the alfalfa "does not increase a plant's rate of growth, final size, or nutrient content."[161]

2. Alfalfa

Alfalfa is a perennial crop that lives, on average, for three to five years.[162] More than 22 million acres of alfalfa are grown in the United States each year.[163] Ninety-nine percent of that alfalfa is used for hay to feed animals.[164] Less than one percent of the alfalfa crop in the United States is used for seed production.[165] Farmers have a financial incentive to harvest their alfalfa crops prior to the crop blooming because once the plant blooms, it loses some of the nutrition valued by the dairy farmers that purchase the hay.[166] Weeds cost farmers in the U.S. around $33 billion per year in lost productivity, while nearly $7 billion is spent on herbicides.[167]

Supporters of genetically modified crops assert that by using a crop, such as Roundup Ready Alfalfa, farmers will need to use less herbicide and will need to spray that herbicide fewer times. This possibility has caused genetically modified crops to be popular with many farmers. Monsanto, as well as other companies, have thus petitioned APHIS for complete deregulation of many genetically altered crops.[168]

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[159] *Id.* at 4.
[160] *Id.*
[161] Brief of Concerned Scientists as Amici Curiae, *supra* note 156, at 8.
[162] Petition for Writ of Certiorari, *supra* note 157, at 3.
[163] *Id.*
[164] *Id.*
[165] *Id.*
[166] *Id.*
[167] U.S. DEP'T OF AGRIC., AGRIC. RESEARCH SERV., INVASIVE WEED MGMT. UNIT, *available at* http://arsweeds.cropsci.illinois.edu (last visited Aug. 31, 2011).
[168] *See* U.S. DEP'T OF AGRIC., ANIMAL AND PLANT HEALTH INSPECTION SERV., PETITIONS OF NONREGULATED STATUS GRANTED OR PENDING BY APHIS AS OF AUG. 23, 2011,

3. APHIS and Deregulation

The purpose of APHIS is to investigate whether or not these proposed deregulations will have a significant environmental impact. The process by which APHIS conducts these investigations was created in order to prevent articles from arbitrary deregulation without environmental risk assessment. The steps to determine deregulation—receiving the deregulation petition, compiling scientific and expert analysis, publishing notice in the Federal Register, accepting comments and making a final determination—were put in place in order to be sure that APHIS was doing its job to protect the environment. Strict adherence to this process is the only way for the public to have confidence that the government takes NEPA's purpose seriously.

When Roundup Ready Alfalfa was deregulated by APHIS, it became the sixty-seventh petition for deregulation of a genetically engineered crop and the eleventh petition to deregulate a glyphosate-resistant crop approved since 1995.[169] Other glyphosate-tolerant crops deregulated by APHIS include soy in 1994, cotton in 1995, corn in 1997, canola in 1999 and sugar beets in 2004.[170]

In the past, when APHIS deregulated a genetically engineered crop, it has prepared an environmental assessment to make the deregulation determination.[171] An EIS is both time-consuming and costly. Several studies have shown that preparing an EIS can take up to five years[172] and the average cost of preparing an EIS has been estimated to be

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available at http://www.aphis.usda.gov/biotechnology/not_reg.html (last visited Aug. 31, 2011).

[169] *Id.*

[170] *Id.* The fate of Roundup Ready Sugar Beets is, like Roundup Ready Alfalfa, currently pending APHIS's completion of an environmental impact statement. *See* Ctr. for Food Safety v. Vilsack, 734 F. Supp. 2d 948 (N.D. Cal 2010).

[171] USDA, PETITIONS OF NONREGULATED STATUS GRANTED OR PENDING BY APHIS, *supra* note 168. Most recently, the U.S. District Court for the Northern District of California relied on *Monsanto* in denying an injunction while APHIS prepares a full environmental impact statement. *Vilsack*, 734 F. Supp. 2d at 954–55.

[172] *See* FED. HIGHWAY ADMIN., EVALUATING THE PERFORMANCE OF ENVTL. STREAMLINING: PHASE II § 3.1.1 (2002), *available at* http://environment.fhwa.dot.gov/strmlng/baseline/phase2rpt.asp#3 (concluding that APHIS's average turnaround time for an environmental impact statement was 4.7 years

around $2.7 million.[173] Therefore, it makes sense that APHIS would want to prepare the shorter environmental assessment if possible.

However, because Roundup Ready Alfalfa is the first genetically modified crop for which there is a risk of gene transmission to conventional and organic crops[174] and only 137 of the 663 public comments APHIS received supported the deregulation of Roundup Ready Alfalfa,[175] APHIS should have taken a harder look at the environmental implications of deregulation. This is not only to protect the environment, but also to protect the livelihood of conventional and organic farmers.

The two major ways conventional alfalfa can be contaminated are by pollen flow and human error.[176] Pollen flow occurs when pollen is released from the plant and is transported by the wind or by insects.[177] Wild insects or honeybees can carry the pollen to adjacent fields where it can mix with conventional alfalfa and cross-contaminate.[178] Human error can happen if farmers do not properly clean their equipment after using it on Roundup Ready fields because residue from those fields can contaminate conventional alfalfa if the equipment is then used on

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between 1995–2001); FED. HIGHWAY ADMIN., EVALUATING THE PERFORMANCE OF ENVTL. STREAMLINING: DEVELOPMENT OF A NEPA BASELINE FOR MEASURING CONTINUOUS PERFORMANCE § 2.0 (2001), *available at* http://environment.fhwa.dot.gov/strmlng/baseline/section2.asp (concluding that the average time it took NEPA to complete an environmental impact statement was five years.); NEPA TASK FORCE, REPORT TO THE COUNCIL ON ENVTL. QUALITY: MODERNIZING NEPA IMPLEMENTATION 66 (Sept. 2003), *available at* http://ceq.hss.doe.gov/ntf/report/finalreport.pdf (concluding that an environmental impact statement typically takes from one to more than six years to complete).

[173] *See* NAT'L ACAD. OF PUB. ADMIN., MANAGING NEPA AT THE DEP'T OF ENERGY IV.C (July 1998), *available at* http://energy.gov/sites/prod/files/G-Oth-Managing_NEPA_DOE.pdf (last visited Aug. 31, 2011).

[174] Brief for Respondents at 43, Monsanto Co. v. Geertson Seed Farms, 130 S. Ct. 2743 (2010) (No. 09-475) 2010 WL 1500893. There is a risk of gene transmission because perennials live for several years and survive winters, making it more likely that wild plants could serve as a contamination bridge between the Roundup Ready Alfalfa and conventional alfalfa. *Id.* at 44.

[175] Geertson Seed Farms v. Johanns, 570 F.3d 1130, 1134 (9th Cir. 2009).

[176] Brief for Union of Concerned Scientists as Amici Curiae, *supra* note 156, at 12.

[177] *Id.* at 27.

[178] *Id.*

conventional fields.[179] In addition, farmers could accidentally spill some of the seed during transport, which could result in feral plants growing on roadsides with the potential to cross-pollinate with conventional alfalfa.[180]

After Roundup Ready Alfalfa was deregulated, it was commercially available to farmers for almost two years.[181] During the time the modified alfalfa was commercially available, more than 3000 growers in forty-eight states planted nearly 220,000 acres of the crop.[182] When the district court entered the injunction, it did not require the destruction of any Roundup Ready Alfalfa seed that had been purchased prior to March 12, 2007 or which had been planted prior to March 30, 2007.[183] The injunction did, however, prohibit farmers from buying additional Roundup Ready Alfalfa, and it also enjoined Monsanto from continuing to market the product.[184] If Roundup Ready Alfalfa becomes completely deregulated after the EIS is prepared, farmers are expected to plant up to 22 million acres of the crop.[185]

4. Alleged Benefits and Risks

There is a possibility that contamination has already occurred because of the length of time Roundup Ready Alfalfa was deregulated. There is also the possibility that farmers have lost significant time and money waiting for the renewed complete deregulation of Roundup Ready Alfalfa, especially those farmers who invested in the modified alfalfa when it was deregulated the first time. This further indicates how important it is for APHIS to take the "hard look" before it completely deregulates an item

Appellants allege that Roundup Ready Alfalfa is beneficial to farmers because using the modified alfalfa allows farmers to use fewer

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[179] Brief for Respondents, *supra* note 174, at 6–7.
[180] *Id.* at 11.
[181] Brief for Petitioners at 13, Monsanto Co. v. Geertson Seed Farms, 130 S. Ct. 2743 (2010) (No. 09-475) 2010 WL 723014.
[182] *Id.* at 14–15.
[183] Geertson Seed Farms v. Johanns, 570 F.3d 1130, 1135 (9th Cir. 2009).
[184] *Id.*
[185] Monsanto Co. v. Geertson Seed Farms, 130 S. Ct. 2743, 2764 (2010).

toxic and expensive herbicides that must be frequently applied.[186] Opponents of deregulation argue that the herbicides designed to kill weeds might now be protecting those same weeds.[187] Opponents are also concerned that farmers will end up using glyphosate more often as weeds become more resistant. According to an EPA study, agricultural use of glyphosate increased 140% from 1997 to 2001 and during that time became the most widely used herbicide in the U.S.[188] A recent survey has shown that twenty-one weed biotypes have developed glyphosate resistance in the U.S. and worldwide.[189] The survey also reports that millions of acres of farmland in the U.S. are infested with ten such resistant species.[190]

Appellants also argued that conventional farmers, organic farmers and farmers who use genetically modified crops can coexist without economic or financial hardship.[191] However, because of the risk of contamination, farmers potentially face great expense.[192] In order to test an alfalfa seed for the presence of the glyphosate-resistant gene, farmers

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[186] Brief for Petitioners, *supra* note 181, at 6. Glyphosate is one of the least environmentally harmful herbicides on the market and because it is no longer under patent protection, it is relatively low cost. Stephen O. Duke & Stephen B. Powles, *Glyphosate: a once-in-a-century herbicide*, 64 PEST MGMT. SCI. 319, 322 (2008).

[187] Brief for Respondents, *supra* note 174, at 4; *see also* Allison Snow, *Transgenic Crops — Why Gene Flow Matters*, 20 NATURE BIOTECH. 542 (2002). Weeds, over time, become immune to herbicides when they are exposed to the chemical repeatedly. Brief for Respondents, *supra* note 174, at 4.

[188] EPA, PESTICIDES INDUSTRY SALES AND USAGE: 2000 AND 2001 MARKET ESTIMATES 14 tbl. 3.6 (2004), *available at* http://www.epa.gov/opp00001/pestsales/01pestsales/market_estimates2001.pdf.

[189] Int'l Survey of Herbicide Resistant Weeds, Herbicide Resistant Weeds Summary Table, http://www.weedscience.org/summary/MOASummary.asp (last visited Aug. 31, 2011).

[190] Brief for Union of Concerned Scientists as Amici Curiae, *supra* note 156, at 35.

[191] Brief of American Farm Bureau Federation et al. at 13, Monsanto Co. v. Geertson Seed Farms, 130 S. Ct. 2743 (2010) (No. 09-475) 2010 WL 1513029; *see also* Graham Brookes & Peter Barfood, *Co-Existence in North American Agriculture: Can GM Crops be Grown with Conventional and Organic Crops?*, PG Economics Ltd (June 7, 2004), http://www.pgeconomics.co.uk/pdf/CoexistencereportNAmericafinalJune2004.pdf.

[192] Brief for Cropp Cooperative et al. as Amici Curiae Supporting Respondents at 13, Monsanto Co. v. Geertson Seed Farms, 130 S. Ct. 2743 (No. 09-475) 2010 WL 1393442.

might have to pay costs of up to $259 per sample.[193] Organic farmers might need to spend around $25,000 each year to verify that their crops are not contaminated with the genetically modified gene.[194]

Sales of certified organic products have topped $25 billion in recent years.[195] Opponents of genetically modified crops contend that consumers choose organic crops specifically to avoid genetically engineered products and because of the decreased environmental impact of organic products.[196] In order to be certified organic, a crop must be grown according to standards set forth by the USDA's National Organic Program, which prohibits methods used to modify organisms by means not possible under natural conditions.[197] Therefore, if cross-contamination occurs, it would be detrimental to organic farmers because they risk losing their organic certification and ultimately, the trust of organic purchasers who have come to rely on organic farmers to avoid herbicides and genetic modification. This is another reason a "hard look" should have taken place before Roundup Ready Alfalfa became completely deregulated.

Respondents maintained that coexistence is impossible because conventional alfalfa farmers have already experienced contamination from Roundup Ready Alfalfa in four different states.[198] Evidence has shown that contamination of conventional crops by genetically engineered crops, other than alfalfa, has already occurred. Volunteer canola plants containing genetically engineered traits were found in conventional fields after two seasons of commercial planting.[199]

Additionally, the contamination of conventional rice by a genetically modified crop called LL601 made headlines throughout the U.S. The contamination hurt the rice industry severely in 2006, causing a

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[193] *Id.* at 14.

[194] *Id.*

[195] ORGANIC TRADE ASS'N, *2010 Organic Industry Survey* 1 (2010), *available at* http://www.ota.com/pics/documents/2010OrganicIndustrySurveySummary.pdf.

[196] Brief for Crop Cooperative, *supra* note 192, at 18; *see also* ORGANIC TRADE ASSOCIATION, Consumer Profile Facts, *available at* http://ota.com/organic/mt/consumer.html.

[197] 7 C.F.R. §§ 205.105(e), 205.2 (2009).

[198] Brief for Ark. Rice Growers Ass'n et al. as Amici Curiae Supporting Respondents at 15, Monsanto Co. v. Geertson Seed Farms, 130 S. Ct. 2743 (2010) (No. 09-475) 2010 WL 1393443.

[199] *Id.* at 20.

billion-dollar decline and, for U.S. grown rice, dropping futures prices by $168 million.[200] The contamination also sparked lawsuits against Bayer CropScience, the creator of the genetically modified rice. The suits, which took place in the United States Court of Appeals for the Eighth Circuit, ended with juries awarding farmers up to $6 million to remedy contamination.[201]

Genetically modified crops have been at the center of a heated debate for years. Both sides can provide facts, statistics and expert witnesses to bolster their argument. It is hard to know for certain which information is relevant, especially since genetically altered crops have only been available for a short time. It is because of this that the importance of close scrutiny on the part of APHIS becomes evident. Despite the time and cost of preparing an EIS, an EIS is vital for the preservation of environmental safety and, as in this case, the economic protection of farmers and others in agriculture.

C. *The Supreme Court's Decision*

The fact that an EIS takes so long to prepare is indicative of the amount of research, tests and information that APHIS must analyze in order to make a decision about the impacts of genetically modified crop. APHIS should follow procedure and take a "hard look" at the evidence every time a new petition is received.

In addition, the Supreme Court made the correct decision in vacating the injunction entered by the lower courts. In their initial action, Respondents attempted to enjoin a complete deregulation of Roundup Ready Alfalfa because of the NEPA violation, not a possible partial deregulation. When the district court ordered APHIS to prepare an EIS before making the decision as to whether to completely deregulate Roundup Ready Alfalfa, Respondent's injury, as stated in the initial suit, had been remedied. Therefore, if APHIS had attempted to partially

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[200] *Id.* at 17.

[201] Robert Patrick, *Rice Farmer is Awarded $500,000 in Case Over Crop Contamination*, ST. LOUIS POST DISPATCH, July 15, 2010, *available at* http://www.stltoday.com/business/article_24421a30-e14c-5a52-be40-d7ac7370e589.html. The jury in one of the cases granted $42 million in punitive damages against Bayer CropScience. *Id.*

deregulate Roundup Ready Alfalfa while conducting the EIS, Respondents would have been able to file a new lawsuit seeking relief from injuries related to the partial deregulation. At that time, the district court would have been required to use the four-factor test to determine if injunctive relief was proper to enjoin partial deregulation.

By attempting to enjoin any further action by APHIS during the preparation of the EIS, the court was effectively taking away the agency's discretionary power. It is APHIS's job to determine, through scientific and expert analysis, whether partial or full deregulation will have a significant environmental impact. In order for APHIS to effectively perform its duties, the courts need to allow APHIS to use its discretion to make decisions based upon the information it gathers. Therefore, the Supreme Court was correct in determining the permanent injunction preventing APHIS from further action was premature and improper.

VI. CONCLUSION

NEPA was originally enacted because the government recognized the importance of environmental and crop safety in the United States. The government empowered APHIS to conduct investigations to determine whether items, such as genetically modified crops, would be safe for use. As technology increases and becomes more readily available, the demand for genetically modified crops also grows. Additionally, alternative crops, such as organically produced crops, continue to grow in popularity as Americans take more interest in where and how crops are produced. With these options, abiding by NEPA regulations and the proper completion of an EA or EIS by APHIS become even more important to farmers and consumers. In order to gain the trust of all interested parties and avoid future NEPA violations, APHIS must take a "hard look" at all of the evidence presented when faced with controversial deregulation decisions. At the same time, courts should defer to APHIS and not interfere with the agency's action unless absolutely necessary.

CHRISTINE K. LESICKO