AG SUPPLY, INC. v. PIONEER HI-BRED INT'L, INC.: STATUTORY CONSTRUCTION AND PLANT PATENTS

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ABSTRACT: In *Ag Supply, Inc. v. Pioneer Hi-Bred Int'l, Inc.*, 534 U.S. 124 (2001), the Supreme Court clarified the overlapping use of the utility patent statute,[1] the Plant Patent Act[2] (PPA), and the Plant Variety Protection Act[3] (PVPA). It held that newly developed plant breeds could be protected under the utility patent statute and concluded that neither the PPA nor the PVPA bars obtaining utility patents for plants. This note outlines the factual background of the case, the analysis of patent protection availability for plants in the majority and dissenting opinions, and the reasoning and outcome.

CITATION: Amy Sun, Note, *Ag Supply, Inc. v. Pioneer Hi-Bred Int'l, Inc.*: Statutory Construction and Plant Patents, 43 Jurimetrics J. 473–481 (2003).

I. FACTS

Pioneer Hi-Bred International, Inc. holds seventeen utility patents over various inbred and hybrid corn seed products.[4] It sold bags of seeds to J.E.M. Ag Supply, Inc. (JEM) under a license permitting only the production of grain and forage.[5] In

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1. 35 U.S.C. §§ 100–376 (2000).

2. 35 U.S.C. §§ 161–64.

3. 7 U.S.C. §§ 2321–2583 (2000).

4. *Pioneer*, 534 U.S. at 127. The U.S. Patent and Trademark Office grants utility patents, plant patents, and design patents. Utility patents can be obtained for "any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof," 35 U.S.C. § 101, and receive a twenty year term of protection. 35 U.S.C. § 154.

5. *Pioneer*, 534 U.S. at 128.

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violation of the license, JEM resold the bags and Pioneer brought a patent infringement action against JEM for "making, using, selling, or offering for sale" their patented corn seed products.[6] JEM filed a counterclaim of patent invalidity, arguing that sexually reproducing plants (including corn) do not constitute patentable subject matter under 35 U.S.C. § 101, the utility patent statute, and that federal statutory protection for plant life is only available through the Plant Patent Act or the Plant Variety Protection Act.[7]

The district court granted summary judgment for Pioneer, holding that § 101 clearly encompasses plant life[8] and that nothing in the legislative histories of the PPA or PVPA supports a conclusion that Congress intended to "remove from the already in place protection of § 101 any subject matter already within the scope of that section."[9] On interlocutory appeal, the Federal Circuit affirmed the judgment.[10] The Supreme Court granted certiorari and affirmed.

II. THE SUPREME COURT'S STATUTORY ANALYSIS

A. The Majority Opinion

Section 101 allows a utility patent for "any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof."[11] Since *Diamond v. Chakrabarty*,[12] courts have held that this broad language extends to living things, including plant life.[13] Thus, the U.S. Patent and Trademark Office has granted utility patents on plants for over fifteen years.[14] JEM nevertheless advanced three arguments to establish that the PPA should preclude the issuing of utility patents on asexually reproduced plants, and three arguments to show that the PVPA should preclude the issuing of utility patents on sexually reproduced plants. In an opinion authored by Justice Thomas, a majority of the court rejected these arguments.[15]

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6. *Id.*

7. *Id.*

8. Pioneer Hi-Bred Int'l, Inc. v. J.E.M. Ag Supply, 49 U.S.P.Q.2d 1813, 1817 (N.D. Iowa 1998).

9. *Id.* at 1819.

10. Pioneer Hi-Bred Int'l, Inc. v. J.E.M. Ag Supply, 200 F.3d 1374, 1375 (Fed. Cir. 2000).

11. 35 U.S.C. § 101.

12. 447 U.S. 303 (1980).

13. *E.g.*, Diamond v. Chakrabarty, 447 U.S. 303, 310–11 (1980) (holding that genetically engineered microorganism was patentable under § 101 as a "manufacture" or "composition of matter"); Ex parte Hibberd, 227 U.S.P.Q. 443 (Bd. Pat. App. and Interferences 1985) (holding that plants were within the understood meaning of "manufacture" or "composition of matter," and thus patentable under § 101).

14. J.E.M. Ag Supply v. Pioneer Hi-Bred Int'l, Inc., 534 U.S. 124, 144 (2001).

15. This case was decided by a 6-2 vote. Justice O'Connor took no part in the consideration or decision of the case.

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1. *Plant Patent Act of 1930*

Prior to 1930, no statutory text specifically protected newly developed varieties of plants.[16] In 1930, the PPA inserted language concerning asexually reproducing plants into the utility patent statute.[17] In 1952, Congress recodified the plant patent statute into 35 U.S.C. §§ 161–164, a relocation which preserved the substantive rights and requirements for plant patents.[18]

JEM argued that § 101 did not originally encompass plants as patentable subject matter.[19] It suggested that if plants had already been patentable, the 1930 PPA would have been redundant.[20] Furthermore, it maintained that enactment of the PPA specifically to protect asexually reproducing plants evinced a congressional intent to exclude sexually reproducing plants from utility patent protection.[21] Finally, JEM pointed out that Congress would not have relocated plants out of § 101 into § 161 if it had intended § 101 to cover plants.[22]

With respect to the first argument, the majority reasoned that before 1930, Congress may have mistakenly believed that plants were not included in the utility patent statute.[23] At that time, plants were not considered patentable because they were perceived as products of nature[24] and not amenable to the written description requirement of the utility patent statute.[25] In *Diamond v. Chakrabarty*,[26] however, the Supreme Court made clear that "the relevant distinction [is] not between living and inanimate things, but between products of nature, whether living or not, and human-made inventions."[27] Therefore, the assumption that plants did not qualify for patent protection prior to the PPA did not mean that they were unable to. New plant varieties developed by means of human intervention and "in aid of nature"[28] are not products of nature. Therefore, they are patentable, and to deny them this protection

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16. *Pioneer*, 534 U.S. at 132.

17. *Id.* The PPA amended § 101 to provide patent protection to any person who invented or discovered "any new and useful art, machine, manufacture, or composition of matter, or any new and useful improvements thereof, or *who has invented or discovered and asexually reproduced any distinct and new variety of plant, other than a tuber-propagated plant* . . . ." Act of May 23, 1930, ch. 312, 46 Stat. 376 (emphasis added). The requirements for obtaining a plant patent were identical to those for obtaining a utility patent, except that the written description needed only be "as complete as is reasonably possible." *Id.* With respect to utility patents, however, 35 U.S.C. § 112 (emphasis added) requires a "written description of the invention, and of the manner and process of making and using it, in such *full, clear, concise, and exact terms* as to enable any person skilled in the art . . . to make and use the same . . . ."

18. *Pioneer*, 534 U.S. at 133.

19. *Id.* at 134.

20. *Id.*

21. *Id.*

22. *Id.* at 137.

23. *Id.* at 134.

24. *Id.*

25. *Id.*

26. 447 U.S. 303 (1980).

27. *Id.* at 313.

28. *Id.* at 312.

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because it was "unforeseen"[29] in 1930 that they could receive any protection under § 101 would be "inconsistent with the forward-looking perspective of the utility patent statute."[30]

In response to JEM's second argument, the majority wrote that the PPA's limitation to asexually reproducing plants "merely reflects the reality of plant breeding in 1930."[31] Congress did not believe that sexual reproduction through seeds was stable enough to preserve bred characteristics,[32] because subsequent generations could fail to exhibit the patented properties of the parent. Asexual reproduction was more consistent, making protection of these types of plants appropriate.[33] In addition, because of the Government's extensive free seed program for farmers, no need existed to protect seed breeding.[34] On the other hand, asexually reproduced fruit trees and flowers had already been successfully commercialized, and plant breeders needed some form of protection against infringers.[35] Thus, it was "not surprising that [asexually reproducing plants] were the specific focus of the PPA."[36]

With respect to JEM's third argument, the Court demanded express congressional language that § 161 be the exclusive vehicle for obtaining protection for plants that "otherwise fit[] comfortably within the expansive language of § 101."[37] The court considered the 1952 recodification a mere "housekeeping measure"[38] that "did nothing to change the substantive rights or requirements for obtaining a plant patent."[39] The Court refused to infer that Congress affirmatively intended to deny protection to sexually reproduced plants under § 101.

2. *Plant Variety Protection Act of 1970*

In 1970, Congress enacted the PVPA, which expressly protects sexually reproduced plants.[40] The PVPA parallels patent protection by granting a Plant Variety Protection certificate. While the requirements for obtaining a certificate are less stringent than those for a utility or plant patent,[41] the protection conferred is

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29. *Pioneer*, 534 U.S. at 135.

30. *Id.* The Court further emphasized that § 101 is a "dynamic provision designed to encompass new and unforeseen inventions." *Id.*

31. *Id.*

32. *Id.*

33. *Id.* at 136.

34. *Id.*

35. *Id.*

36. *Id.* at 137.

37. *Id.* at 138.

38. *Id.*

39. *Id.*

40. *Id.* The PVPA is administered by the Department of Agriculture, whereas the U.S. Patent and Trademark Office handles utility and plant patents.

41. For example, to obtain a PVP certificate, an applicant need not demonstrate usefulness or nonobviousness, two requirements that must be met to obtain a patent. 7 U.S.C. § 2402; 35 U.S.C. §§ 101, 103.

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also less.[42] It is therefore advantageous to obtain the broader protection afforded by a utility or plant patent if one can satisfy the stricter requirements. JEM nonetheless presented three reasons why the PVPA precluded the validity of Pioneer's utility patents.

First, JEM argued that a House report on the PVPA shows that prior to its enactment, sexually reproducing plants were not within the definition of patentable subject matter under § 101.[43] Second, JEM argued that the PVPA altered § 101's subject matter by implication—that by specifically protecting sexually reproduced plants in the PVPA, plants in general were eliminated as patentable subject matter under § 101.[44] Third, JEM argued that dual statutory protection under both § 101 and the PVPA is impermissible.[45]

In rejecting JEM's first argument, the Court declared that the House report stating that sexually reproducing plants were not eligible for patent protection merely reflects the limited and undeveloped perception of plant patentability at the time.[46] As with the PPA, the Court observed that nowhere in the PVPA is there any indication that PVP certificates were intended to be the exclusive means for protecting sexually reproduced plants.[47]

The majority also rejected JEM's second argument, reasoning that a repeal by implication is appropriate only when "the earlier and later statutes are irreconcilable."[48] The majority outlined the different requirements and scopes of protection of § 101 and the PVPA,[49] finding a "parallel relationship"[50] and no "positive repugnancy"[51] between the two statutes, which could comfortably "mutually coexist."[52]

With respect to JEM's third argument, the majority stressed the Court's practice of allowing overlapping statutes where "each reaches some distinct

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42. Exemptions permitted under the PVPA constitute acts of infringement under patent law. For example, non-licensed use of a certificate-protected seed for "bona fide" research is permitted. 7 U.S.C. § 2544. Likewise, a farmer who purchases a certificate-protected seed can plant the seed and save new seeds obtained from that planting for replanting. 7 U.S.C. § 2543.

43. *Pioneer*, 534 U.S. at 141. JEM relied on a House report stating: "Under patent law, protection is presently limited to those varieties of plants which reproduce asexually . . . . No protection is available to those varieties of plants which reproduce sexually . . . ." *Id.* at 141 n.13 (quoting H.R. REP. No. 91-1605, at 1 (1970)).

44. *Id.* at 141.

45. *Id.* at 144.

46. *Id.* at 135.

47. *Id.* At 137.

48. *Id.* at 141–42 (quoting Morton v. Mancari, 417 U.S. 535, 550 (1974)).

49. To obtain a PVP certificate, it is not necessary to show that the plant is "useful" or "nonobvious," as is required to obtain a utility patent. Additionally, the written description and disclosure need not be as extensive. In terms of scope of protection, the permitted unlicensed use of PVPA-protected plants by farmers and researchers would be considered acts of infringement under the utility patent statute, which prohibits all forms of unlicensed making, using, offering for sale, selling, or importing of the patented invention. 35 U.S.C. § 271.

50. *Pioneer*, 534 U.S. at 142.

51. *Id.* at 143.

52. *Id.* (quoting Radzanower v. Touche Ross & Co., 426 U.S. 148, 155 (1976)).

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cases."[53] While utility patents and the PVP certificates contain "some similar protections,"[54] the majority found the overlap to be "only partial."[55] Indeed, the Court observed that overlapping protection could be beneficial in providing an additional incentive to inventors. A plant breeder who could not meet the stringent requirements of § 101 might still be motivated to invent by the protections afforded by the PVPA.[56] Therefore, the majority concluded, the PVPA does not exclude plants from the coverage of § 101.[57]

B. The Dissenting Opinion

Justice Breyer, in a dissent joined by Justice Stevens, maintained that the words "manufacture" and "composition of matter" in § 101 do not encompass plants because the PPA and PVPA foreclose such protection.[58] According to the dissenting Justices, the PPA reveals the legislative intent to exclude from utility patent protection "those plants to which the specific plant statutes refer," namely, "all" plants.[59] This is so because "many plants—perhaps virtually any plant—can be reproduced 'asexually' as well as by seed."[60] As a result, the requirement that a plant be asexually reproduced does not exclude from PPA protection plants that reproduce sexually by seed.

Justice Breyer noted that the PPA requires the plant breeder to have asexually reproduced the plant to obtain protection.[61] If § 101 also included plants, a plant breeder who could not asexually reproduce the plant to satisfy the requirements of the PPA could still obtain utility patent protection, because § 101 contains no such limitation.[62] This would "virtually nullify the PPA's primary condition [of asexual reproduction].[63] Furthermore, § 101's grant of the exclusive right to sexually reproduce the patented plant would "read out of the statute the PPA's more limited list of exclusive rights [which do not include sexual reproduction]."[64] Section 101

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53. *Id.* at 144.

54. *Id.*

55. *Id.*

56. *Id.* at 605. Similarly, an inventor who wanted to commercialize his invention but not fully disclose it to the public could opt for trade secret protection instead of patent protection.

57. *Id.* at 145.

58. *Id.* at 147.

59. *Id.* at 149–50.

60. *Id.* at 150.

61. *Id.* Asexual reproduction was required because it ensured that the "variety's new characteristics had genetic (rather than, say, environmental) causes and would prove genetically stable over time," something that sexual reproduction could not guarantee. *Id.*

62. *Id.* at 152.

63. *Id.* It would border on the absurd, Justice Breyer suggested, for a plant to be protected under the vague "manufacture" or "composition of matter" provisions of § 101 when it could not be protected as a "plant" under the PPA. *Id.*

64. *Id.*

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must therefore exclude plants, lest it vitiate the PPA.[65] Justice Breyer claims that as a later, specific statute, the PPA trumps the earlier, more general § 101.[66]

Justice Breyer maintained that enactment of the PVPA did not alter this scheme.[67] Congress enacted the PVPA to respond to the growing need for protection of crops that were valuable only when reproduced by seed.[68] The PVPA gives the plant breeder the exclusive right to sexually (and asexually reproduce) his plant, thus closing the gap in protection for sexually reproducing varieties left open by the PPA.[69] But, Justice Breyer argued, "nothing in the history, language, or purpose of the [PVPA] suggests an intent to reintroduce into the scope of the general words 'manufacture, or composition of matter' the subject matter the PPA had removed, namely, plants."[70] This would render meaningless the research and farmer exemptions in the PVPA, because plant breeders would simply disregard the less extensive PVPA protection and seek broad utility patent protection which allows no such exemptions.[71] Therefore, the PVPA must be the only means of protecting sexually reproduced plants, and § 101 cannot include plants, either asexually or sexually reproducing varieties.[72]

PART III. ANALYSIS

The constitutional goal of promoting "the Progress of Science and useful Arts"[73] forms the bedrock principle of the patent system and the key to understanding how the majority interpreted the statutes in *Pioneer*. Neither the majority nor the dissent looked directly to this fundamental purpose to justify its position.

In interpreting § 101, the majority applied what has been called the new textualism.[74] It rejected the consideration of extra-statutory information and the apparent views of a later Congress because plants "have always had the *potential* to fall within the general subject matter of § 101"[75] and because they fit "comfortably within the expansive language of § 101."[76]

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65. *Id.*

66. *Id.* at 152–53 (citing U.S. v. Estate of Romani, 523 U.S. 517, 530-33 (1998)).

67. *Id.* at 153.

68. *Id.* Sexual reproduction, i.e. by seed, enables the production of hybrid seeds which are valuable because "they produce strong and vibrant hybrid plants with selected highly desirable characteristics," for example, seedling vigor, strong roots and stalks, and stay green. *Id.* at 128. Asexual production, on the other hand, cannot generate hybrids.

69. 7 U.S.C. § 2483.

70. *Pioneer*, 534 U.S. at 154.

71. *Id.*

72. *Id.* at 147.

73. U.S. CONST. art. I, § 8, cl. 8.

74. New textualism shuns the use of any legislative history in statutory interpretation. It insists that legislative history is unreliable and lacking in legal authority, since "only the text of the statute [was] enacted." John M. Walker, Jr., *Judicial Tendencies in Statutory Construction: Differing Views on the Role of the Judge*, 58 N.Y.U. ANN. SURV. AM. L. 203, 219 (2001).

75. *Pioneer*, 534 U.S. at 135 (emphasis in original).

76. *Id.* at 138.

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This outcome can be defended in terms of patent policy. Giving effect to the anachronistic views of Congress and excluding plants from § 101 could have diminished innovation in plant science and technology. Firms in the business of enhancing sexually reproducing plants would hardly be motivated by the prospect of PVPA protection to develop new plant varieties. Because of the seed-saving exemption, it would be economically infeasible to invest millions of dollars into research and development only to transact a one-time sale with farmers.

In discussing the PVPA, the Court arguably applied a form of "dynamic statutory interpretation."[77] It rejected the legislative history because it "stem[med] from a lack of awareness concerning scientific possibilities."[78] The majority self-delegated the duty to update archaic legislation rather than to interpret it faithfully, but it masked this approach with the textualist observation that "nowhere does [the PVPA] restrict the scope of patentable subject matter under § 101."[79]

In deciding whether the PVPA precludes § 101 from covering sexually reproduced plants, the critical issue is how the judiciary should deal with the overlapping statutes. Although Justice Breyer concluded that § 101 protection for plants would "destroy"[80] the PVPA exemptions, he failed to explain why two overlapping statutes should not both be given effect if each reaches some distinct cases. A plant breeder who opts for utility patent protection over the PVPA does not render meaningless the PVPA's exemptions, because there are still other plants that qualify for PVPA protection but cannot satisfy the stringent requirements of § 101. For these plants, PVPA protection, along with its exemptions, is the only option. Allowing § 101 to include plants therefore does not nullify the PVPA. The fact is that utility patents for plants have not made the PVPA obsolete. Over 5,000 PVP certificates have been issued, as compared to roughly 1,800 utility patents for plants.[81]

Because the U.S. Patent and Trademark Office has already issued utility patents to plants for over fifteen years,[82] the majority's holding in *Pioneer* does not drastically alter the preexisting legal landscape. However, it does conclusively settle patentability issues for plants, much like *Chakrabarty* did for living organisms. Thus, it secures the agricultural industry's incentive to invest the enormous amounts of "time, energy, money, and intellectual power"[83] required to create new varieties

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77. *See* William N. Eskridge, Jr., *Dynamic Statutory Interpretation*, 135 U. PA. L. REV. 1479 (1987); Bernard Bell, *Hypnotized by Images of the Past: Dynamic Interpretation and the Flawed Majoritarianism of Statutory Law*, ISSUES IN LEGAL SCHOLARSHIP Article 12 (2002) (urging courts to "abandon their role as 'faithful agents' of enacting legislatures . . . [and] interpret statutes in light of changes in societal values that postdate the statute's enactment.").

78. *Pioneer*, 534 U.S. at 141.

79. *Id.* at 140.

80. *Id.* at 155.

81. *Id.* at 140 n.12 (quoting Tr. of Oral Arg. 41).

82. *Pioneer*, 534 U.S. at 144.

83. Elisa Rives, Comment, *Mother Nature and the Courts: Are Sexually Reproducing Plants and Their Progeny Patentable Under the Utility Patent Act of 1952?*, 32 CUMB. L. REV. 187, 194-95 (2001).

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of genetically engineered seeds and plants. If the industry can satisfy the demanding requirements of § 101, it will be able to avoid resorting to limited PVPA protection, which cuts off the opportunity to profit from a patent after the first sale.

On the other hand, *Pioneer* deals a substantial blow to the interests of farmers. Saving seed from the best crop of the season for replanting is not only a traditional and historical practice, but a common law right, which the PVPA exemption preserves.[84] Licensing, in contrast, prevents a "one-time sale"[85] and obligates farmers to pay seed producers year after year.[86] Although the Supreme Court's holding in *Pioneer* injures farmers' interests, it cannot be said that the Court unfairly interpreted the patent statutes to favor industry. Rather, the decision is justified in that it ultimately serves the fundamental constitutional patent policy of promoting invention and scientific progress.

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84. *See* Jeremy P. Oczek, Note, *In the Aftermath of the "Terminator" Technology Controversy: Intellectual Property Protections for Genetically Engineered Seeds and the Right to Save and Replant Seed*, 41 B.C. L. REV. 627, 629, 654 (2000).

85. Rives, *supra* note 83, at 202.

86. *See* Oczek, *supra* note 84, at 654. The "terminator" technology, which alters seeds so that plants produced from them bear sterile seeds, produces the same result. It, too, has proved controversial. *Id.*

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