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KEY SUPREME COURT RULING ON PLANT PATENTS
— by Roger A. McEowen* and Neil E. Harl**

A late 2001 U.S. Supreme Court ruling1 that newly developed plant breeds are patentable under the general utility patent laws of the United States has important implications for farmers, plant breeders and consumers.

Facts of the Case

Pioneer held seventeen general utility patents2 covering the manufacture, use, sale, and offer for sale of its inbred and hybrid corn seed products, and sold the protected seeds under a limited label license that allowed only the production of grain and/or forage, and prohibited the use of the seed for propagation or seed multiplication or the development of a hybrid or different seed variety. J.E.M Ag Supply (J.E.M.) bought patented seeds in bags bearing the license agreement. When J.E.M resold the bags, Pioneer sued for patent infringement. J.E.M. moved for summary judgment on the basis that Pioneer’s patents were invalid because plants are not patentable subject matter within the scope of 35 U.S.C. § 101, and that the Plant Patent Act (PPA)3 and the Plant Variety Protection Act (PVPA)4 set forth the only statutory protection for intellectual property rights in plants. J.E.M.’s motion was denied and the trial court ruled for Pioneer,5 the Federal Circuit affirmed,6 and the Supreme Court granted certiorari.7

Scope of 35 U.S.C. §101 – the Patentability of Plants

35 U.S.C.§101 provides:

“Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.”

In Diamond v. Chakrabarty,8 the Supreme Court concluded that the Congress drafted 35 U.S.C. §101 broadly with the intent that the patent laws be given wide scope,9 and held that a manmade micro-organism fell within the statute’s scope. The Court noted that the Congress made a statutory distinction between products of nature and manmade inventions, rather than between living and inanimate things.

The Court’s language in Diamond v. Chakrabarty9 was generally believed to be sufficiently broad to suggest that even plants that could be protected under the PPA or the PVPA could be the object of a general utility patent. Indeed, this position was confirmed in a 1985 case involving genetically engineered corn,10 and since that time the U.S. Patent and Trademark Office has issued nearly 2,000 utility patents

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for plants, plant parts, and seeds under 35 U.S.C. §101. Consequently, the Pioneer Court had no trouble holding that newly developed plant breeds fall within the scope of 35 U.S.C. §101.

**Exclusivity of PPA and PVPA**

The crux of J.E.M.’s position was that the Congress, in enacting the PPA and the PVPA, provided the exclusive statutory means for protecting plant life because both Acts are more specific than 35 U.S.C. §101 and thereby carve out plants from utility patent law for special treatment. However, the Court noted that the PPA did not contain any statutory language indicating that the Congress intended the PPA to serve as sole means of protection for asexually reproduced plants. J.E.M. also maintained that the Congress intended the PPA as the sole means of protection for intellectual property rights in plants because existing general utility patent laws (as of 1930) did not allow for patents on plants, and that there would have been no reason to enact the PPA had general utility patent law allowed plant patents. The Court disagreed, reasoning instead that J.E.M.’s argument failed to account for the state of patent law and plant breeding as of 1930, which involved a general presumption that plants were products of nature and were not amenable to the written description requirement of utility patent law. Thus, when the PPA was enacted, the Congress believed that plants were not patentable under utility patent law because they were viewed as living things not amenable to a written description, and not because they could not have been patentable subject matter under 35 U.S.C. §101.

The Court also rejected J.E.M.’s argument that the PVPA was the exclusive mechanism for protecting intellectual property rights in plants. The Court noted that the language of the PVPA did not restrict the scope of patentable subject matter under 35 U.S.C. §101, and did not contain any statement of exclusivity. The Court took particular note that, at the time of the PVPA’s enactment in 1970, the PTO had already issued numerous utility patents for hybrid plant processes, and had assigned utility patents for plants since 1985 with no indication from the Congress that such action was inconsistent with the PVPA or the PPA.

**Implications of the Court's Opinion**

In recent years, seed companies have been taking legal action against farmers for saving seed protected by a utility patent. Much of that litigation was on hold pending the Supreme Court’s opinion. It is now expected that the litigation will resume and intensify. An important point is that conventional seed as well as genetically modified seed may be patented. Farmers using such seed do not have the right to save any of the seed for replanting.

The opinion is also anticipated to further accelerate the amount of germplasm that is held privately rather than in the public domain as seed companies devote additional resources to patent any seed that is economically worth planting, whether genetically modified or conventional. That could have serious ramifications for the breeding programs of public plant breeders. Relatedly, the opinion clears the way for inbred and hybrid seed products developed by public research institutions to be patented consistent with the Bayh-Dole Act of 1980. This could result in public research being directed to a greater extent towards satisfying the desires of the firms that purchase the rights to the patents or otherwise exert pressure on public research, and to a lesser extent towards the desires of farmers and consumers.

The opinion could also lead to increased concentration, now approaching monopoly in some areas, of germplasm in private hands, reduced competition and innovation in plant breeding (including that from public breeding), increased concentration due to small seed companies being unable to find new breeding material, and greater control by the firm holding the patent over the crops grown from patented seed. Consumers may ultimately be negatively impacted by such events.

Clearly, the Congress bears the burden to modify the existing statutory language of 35 U.S.C.§101, the PPA or the PVPA if it is desired that plants not be patentable, or the projected impacts of the Court’s opinion be avoided.

**FOOTNOTES**

2. The patents were issued under 35 U.S.C. § 101.
4. 7 U.S.C. § 2321 et seq.
6. 200 F.3d 1374 (Fed. Cir. 2000).
9. The trial court in *Pioneer Hi-Bred International, Inc. v. J.E.M. Ag Supply, Inc.*, 49 U.S.P.Q. 2d (BNA) 1813 (N.D. Iowa 1998), noted that the text of 35 U.S.C. § 101 has generally been construed liberally to include the diverse range of imaginable and unforeseen technological developments. See also, *In re Bergy*, 596 F.2d 952 (C.C.P.A. 1979) (section 101 drafted broadly and in general terms). Also, the Committee reports accompanying the 1952 revisions to the PPA indicate that the Congress intended statutory subject matter to “include anything under the sun that is made by man.” S. Rep. No. 82-1979 at 5 (1952). Likewise, in *State Street Bank & Trust Co. v. Signature Financial Group, Inc.*, 149 F.3d 1368 (Fed. Cir. 1998), cert. denied, 525 U.S. 1093 (1999), the court noted the Congressional intent that the patent laws be construed liberally when it upheld a patent for a business method that used a mathematical formula. 447 U.S. 303 (1980).
10. Ex parte Hibberd, 227 U.S.P.Q. (BNA) 443 (Bd. Pat. App. & Interferences 1985) (maize plants within the understood meaning of “manufacture” or “composition of matter” and therefore were within the subject matter of 35 U.S.C. §101; PPA and PVPA enacted out of concern that plants would not qualify for patent protection rather than because Congress thought plants were inherently unpatentable).
11. The point is a critical one. The PPA only protects asexually reproducible plants, and the PVPA, while protecting sexually reproducible plants, contains
exemptions for research and for farmers to save seed from their crops for replanting. Utility patents issued for plants do not contain such exemptions.

The Court noted that denying patent protection under 35 U.S.C. § 101 simply because such coverage was thought technologically infeasible in 1930 would be inconsistent with the forward-looking perspective of the utility patent statute. See, e.g., In re Bergy, 596 F.2d 952 (C.C.P.A. 1979) (section 101 drafted broadly and in general terms). Also, the trial court in Pioneer noted that the intent of the Congress in adopting the PPA and the PVPA was to extend patent protection to an area not often able to meet the requirements of 35 U.S.C. §112 (written description requirement), given the limits of plant science at the time each act became law. 49 U.S.P.Q.2d (BNA) 1813 (N.D. Iowa 1998).

See also S. Rep. No. 91-1246 at 3 (the PVPA “does not alter protection currently available within the patent system.”)

35 U.S.C. §§200 et. seq. (effective July 1, 1981, the Act allows public research institutions to patent research resulting from federal support, and represented a landmark change in United States technology policy).

Presently, the top 10 seed companies control approximately 31 percent of the worldwide commercial seed market. In North America, two firms control 69 percent of the seed corn market and 47 percent of the soybean market. One firm, Monsanto, sells approximately 90 percent of the genetically engineered seeds in the United States.

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**ANIMALS**

**ANIMAL ABUSE.** The defendant was convicted of one misdemeanor count of animal abuse under Mo. Rev. Stat. § 578.012, arising out of the escape of 30 cattle after a tree blew down in a storm onto the defendant’s fence. The defendant challenged the conviction on the grounds that the state failed to show that the defendant knowingly failed to provide adequate control of the cattle. The court pointed to extensive testimony from area farmers that cattle fences had to be inspected almost daily and that the defendant’s cattle had escaped on several occasions. In addition, the court noted that the defendant’s own testimony demonstrated that the defendant’s fence was particularly susceptible to damage from erosion and falling trees. The defendant also testified that the defendant did not frequently check the fences. The court held that the evidence demonstrated that the defendant was so careless in maintaining the fences that the defendant knew the cattle were going to escape; therefore, the state had proven the defendant knowingly failed to provide adequate control of the cattle. The decision is a bit troubling because the conviction arose from only one incident, the escape of the cattle after a storm blew a tree down on the fence. There was no discussion of how much time elapsed after the storm and before the cattle escaped, which would have indicated that the defendant’s infrequent fence inspection led to the cattle escape. Without this information, it appears that the defendant was convicted for the previous escapes as a pattern of behavior, since the event which gave rise to the conviction was beyond the control of the defendant. Justice may have been done, but bad law may have resulted. State v. Blom, 45 S.W.3d 519 (Mo. Ct. App. 2001).

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**BANKRUPTCY**

**GENERAL-ALM § 13.03.**

**DISCHARGE.** The debtor borrowed money from a bank and told the bank that the money was to be used for purchasing horses. The debtor granted the bank a purchase money security interest in all horses located at the debtor’s farm. The money was deposited in the debtor’s checking account but was never used to purchase horses. Instead, the debtor testified that the money was used for unforeseen expenditures, including paying off a loan on the debtor’s truck so the vehicle could be traded-in for a new truck, paying off large telephone bills, the purchase of new furniture for the debtor’s home, the purchase of a new heating unit and roof for the house, and for mental health care for the debtor’s son. The loan was in default when the debtor filed for bankruptcy and the bank sought to have the debt declared nondischargeable, under Section 523(a)(2)(A), for false representation in obtaining the loan. The bank claimed that the debtor had no intention of purchasing horses with the loan proceeds. The court found that several of the expenditures were not unforeseen: (1) the telephone charges existed before the loan was made, (2) the payment of the truck loan was not necessary for the trade-in, and (3) the purchase of the new furniture was not necessary. The court held that the debtor did not intend to use the loan proceeds to purchase horses and used false representation to obtain the loan; therefore, the loan amount was not dischargeable. In re McCoy, 269 B.R. 193 (Bankr. W.D. Tenn. 2001).

**PREFERENTIAL TRANSFERS.** Two days before the debtor’s marriage, the debtor transferred 712 acres of farmland to the debtor’s son for $10, but did not record the deed. The deed was recorded during divorce proceedings in which the former spouse was awarded a lien on the debtor’s interest in the farmland. The former spouse sued to set aside the transfer to the son but the state court ruled that the