

AGRICULTURAL PATENT ISSUES

Introduction

Patents encourage creativity and technological development by ensuring that inventors can recoup research and development costs. Patents have been important to agriculture which owes a large part of its productivity growth to new technologies that might not have been created in the absence of patent protection. A patent grants rights to inventors allowing them to benefit from their creations for a specified period, usually 20 years.

History of Patent Law

Patent rights were mentioned in the US Constitution. The first patent law was passed in 1793, covering 'utility' patents – any new and useful process, machine, etc. The first patent law relating to agriculture was the Plant Patent Act of 1930, allowing for patents for asexually produced plants. In 1954, the PPA was amended to include seeds, mutants and hybrids.

The 1970 Plant Variety Protection Act (amended in 1994) allowed patents for sexually reproduced plants. The Act does not restrict farmers' rights to save plant seed but it does prevent farmers from selling seeds under patent. Several Supreme Court decisions strengthened patent rights for seeds.

Public Concern

The advent of agricultural biotechnology and the ability to engineer crops with herbicide tolerance and insect resistant traits has led to an explosion of patent filings for agricultural seeds. While these seeds are attractive to farmers because they offer cost-reducing and yield-increasing opportunities, the public has become concerned that patent ownership may lead to monopoly power.

Monsanto and DuPont, for example, each account for roughly 30% of corn and soybean seed sales while Syngenta has 10% of the market. As noted in the discussion of antitrust issues, though, these percentages do not approach a level of concentration – judged by *individual* patent-holders – required for antitrust infractions.

Innovation and Intellectual Property Rights

A distinctive feature of the seed industry is that innovation is crucial and heavily dependent on sizeable research and development investments. Financing for agricultural research has shifted from the public sector to the private sector. Commitment to R&D by private firms relies on the existence and enforcement of intellectual property rights (IPR), patents in particular. Absent IPRs, private firms have little incentive to engage in expensive R&D. However, strong IPRs can confer limited monopolies – thus the tension between IPR and antitrust concerns.

Both IPR and antitrust laws share a common ultimate objective – to increase efficiency and thus improve the performance of a market economy. But sorting out what is a legitimate exercise of IPR-related exclusivity from exclusionary practices that are prohibited by antitrust statutes remains difficult.

Intellectual Property Rights and Independent Research

One example of tension between intellectual property rights and potentially exclusionary practices is licensing. Patent holders can place restrictions on the use of their products through licenses, including, for example, restrictions on independent research on productivity claims or testing for health and environmental impacts. Many scientists at universities are dependent on financing or technical cooperation from big seed companies and that cooperation is often denied or the company insists on reviewing findings before they can be published.

In 2009, 26 corn-insect scientists complained to the EPA that “no truly independent research can be legally conducted on many critical issues.” In response, seed companies say they are protecting their intellectual property rights and are complying with regulatory obligations set by the EPA. This is another example of the tension between legal and legitimate exclusivity of IPR rights and potentially exclusionary imposition of these rights.

ANTITRUST GUIDELINES FOR THE LICENSING OF INTELLECTUAL PROPERTY

The Department of Justice and the Federal Trade Commission issued *Antitrust Guidelines for the Licensing of Intellectual Property* in an attempt to clarify the tensions between IPRs and possible misuse of these rights. The *Guidelines* state that some market restraints (e.g, price fixing) are illegal in all cases, including intellectual property. Another guiding principle, however, states that if a patent does confer market power, that market power does not, by itself, offend antitrust laws. Market power that is solely a consequence of a superior product, business acumen or historic accident does not violate antitrust laws. In considering possible antitrust action, the DOJ and FTC “will balance the competitive efficiencies and the anticompetitive effects to determine the probably net effect on competition” in each situation. In other words, there is no simple answer to these competing public benefits.

Sources

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3. New York Times. Crop Scientists Say Biotechnology Seed Companies are Thwarting Research. February 20, 2009
4. US Department of Justice and the Federal Trade Commission. Antitrust Guidelines for the Licensing of Intellectual Property. 1995