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**I** UNIVERSITY OF ILLINOIS  
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Genetically modified organisms (GMOs) and their relationship to intellectual property (IP) rights raise a variety of issues for a variety of professionals in widely diverse fields. For the crop scientist, a GMO represents the product of harnessing and exploiting knowledge about molecular genetics; for the seed producer, it is the basis for competitive advantage in important ag-biotech markets; for the Patent Office, it may represent a non-obvious improvement.

As disparate as these outcomes may seem, they are drawn together by the fact that patent rights occupy an important place upstream in the value chain in the modern food sector. Granting patent rights for biotechnology-enhanced seed induces private investment in research and development, creates differentiated ag-input markets, and, as we have witnessed with European consumers' unwillingness to accept GMO foods, differentiated downstream product markets. Linking the role of IP rights in agriculture through the value chain shows not only how technology, markets and social policies are tightly coupled, but also indicates why IP rights are at the center of many emerging social priorities.

**SEEDS OF CHANGE**

*Intellectual Property Protection  
for Agricultural Biotechnology*

**April 8-10, 2004**



## SEEDS OF CHANGE: *Intellectual Property Protection for Agricultural Biotechnology* • April 8-10, 2004



While technological change, globalization, and increased corporate ownership have radically changed the face of agriculture, such changes are not unique to farming and food production, but are endemic to a rather diverse set of industries. What is unique to agriculture is how these changes redefine social priorities, valuing:

- food safety and security over production;
- access to a so-called level playing field over ownership and control;
- sustainability over conventional or organic agriculture; and
- market governance over market share.

Intellectual property is the common denominator in each of these issues.

Of course, patents in agriculture are nothing new—the first U.S. patent ever granted was for potash. However, with today's agriculture closely integrated with other sectors of the economy, it means that such diverse professionals as molecular chemists, computer scientists, commercial artists, and psychologists are now collaborators in agricultural value chains. So it is no surprise that innovations from such diverse fields can be the subject of patent disputes in agricultural contexts. In the near future, we might expect patent disputes for a rather broadly defined set of food system technologies, such as scanning, sorting, transportation and management (inventories, financial positions, and the like) technologies, in addition to the patents for new types of seeds, plants, and pesticides with which we are already familiar.

Consider the impact in this area alone. Life-science companies are the driving force in development of new plant varieties, as well as the providers of unprecedented levels of funding to public research universities.

- Six major parent companies currently control most of the U.S. seed industry, building a supply chain from the creation and retailing of new varieties to farmers, and extending from farmers to end-users.
- Passage of the Plant Variety Protection Act in 1970 provided the first protection for new varieties of sexually reproduced seed crops other than hybrids. The Act was amended in 1994 in response to the 1991 International Union for the Protection of New Varieties of Plants Convention. Judicial action throughout the 1980s also significantly expanded legal protection for biotechnological innovation such as genetic engineering—most notably with the 1980 U.S. Supreme Court decision in *Diamond v. Chakrabarty* which held that the fruits of modern biotechnology, including living subject matter, were eligible for utility patent protection, and the 1985 case of *Ex parte Hibberd* where the U.S. Patent and Trademark Office concluded that all plants are eligible for utility patent protection.
- The most recent U.S. Supreme Court case regarding patentability of plant varieties, *J.E.M. v. Pioneer* (2001), acknowledges the contribution of genetic engineering to unprecedented technological advancement in plant breeding by confirming that the holding of *Chakrabarty* includes agricultural biotechnology. In this case, industry officials from companies such as Monsanto Co., Cargill, BASF and DuPont/Pioneer argued that without patents for plants, companies would not be able to protect modifications of their plant varieties from copycats.

At the international level, reflecting on globalization of the agribusiness economy, in 1995, the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPs) took effect. TRIPs falls under the World Trade Organization (WTO) and it obligates all members to make patents available for any invention, whether product or process, in any field of technology, without discrimination. By placing intellectual property rights in the WTO and making them subject to its binding disputes procedure, proponents of the intellectual property rights are equipped to force non-compliant WTO members to face trade sanctions in any area if they fail to obey its rules, and consequently it implements rules on domestic enforcement procedure in international law. This leverage is an important reason why intellectual property rights are integrated into the WTO, instead of the existing body promoting intellectual property rights such as the World Intellectual Property Organization (WIPO).

It is not difficult to see that the questions posed by the emergence of IP rights in ag biotechnology are challenging, complex, and perhaps irreconcilable. At this conference, we have created a unique forum by bringing together an extraordinary group of individuals from different disciplines and professional backgrounds, from the public and private sectors, and from the U.S. and abroad—to address the key legal, economic and public policy issues regarding intellectual property rights in agricultural biotechnology.

## LOCATION

The conference will take place on the campus of the University of Illinois at Urbana-Champaign. Directions and location details are available at [www.ipagcon.uiuc.edu](http://www.ipagcon.uiuc.edu)

## SCHEDULE

The conference includes full-day sessions on Thursday, April 8 and Friday, April 9. Presentations on Saturday, April 10 will conclude with a luncheon at noon. Visit [www.ipagcon.uiuc.edu](http://www.ipagcon.uiuc.edu) for specific program details.

## REGISTRATION

For registration on or before March 15, the fee is \$175 per person (\$125 for academics and government.) After March 15, the fee is \$195 (\$125 for academics and government). Cancellations with full refunds will be accepted until March 29. Substitutes may attend. The fee includes admission to all panel sessions; breakfast and lunch on Thursday, Friday, and Saturday; dinner on Thursday evening; and a book of all conference presentations.

Please register at [www.ipagcon.uiuc.edu](http://www.ipagcon.uiuc.edu), where you will also find the most up-to-date program details, as well as hotel accommodation information.

## ADDITIONAL INFORMATION

For program content, please contact Associate Professor Jay Kesan, University of Illinois College of Law, at [kesan@law.uiuc.edu](mailto:kesan@law.uiuc.edu) or at 217.333.7887.

For conference logistics, contact [pfolsen@law.uiuc.edu](mailto:pfolsen@law.uiuc.edu)

## CONFIRMED CONFERENCE SPEAKERS

### *Plenary Speaker*

The Honorable Randall R. Rader, Circuit Judge, United States Court of Appeals in the Federal Circuit, Washington, D.C.

### *Banquet Speaker*

Edmund J. Sease, Esq., McKee, Voorhees & Sease, P.L.C., Des Moines, Iowa—argued the *J.E.M. v. Pioneer* case in the U.S. Supreme Court

### *Panelists*

Marc Banik, Assistant Professor, Department of Management and Technology, Université du Québec à Montréal, Canada

Dan L. Burk, Oppenheimer, Wolff & Donnelly Professor of Law, University of Minnesota Law School

Steven T. Buccola, Professor and Distinguished Fellow of the American Agricultural Economics Association, Department of Agricultural and Resource Economics, Oregon State University

Jim Chen, James L. Krusemark Professor of Law, University of Minnesota Law School

Graham Dufield, Professor and Herchel Smith Senior Research Fellow, Queen Mary Intellectual Property Research Institute, University of London

A. Bryan Endres, Assistant Professor, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign

Jeremy D. Foltz, Assistant Professor, Department of Agricultural & Applied Economics, University of Wisconsin at Madison

Andres A. Gallo, Assistant Professor, Department of Economics, University of North Florida

Peter D. Goldsmith, Assistant Professor and NSRL Endowed Fellow in Agricultural Strategy, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign

Gregory D. Graff, Post-Doctoral Fellow, Department of Agricultural and Resource Economics, University of California at Berkeley and Director of Research, Bio Economic Research Associates

Paul Heisey, Economist, Economic Research Service, U.S. Department of Agriculture

Yusuke Hiraki, Hiraki & Associates, Tokyo, Japan

Cynthia M. Ho, Clifford E. Vickrey Research Professor, Loyola University Chicago School of Law

Mark D. Janis, Professor and H. Blair & Joan V. White Intellectual Property Law Scholar, University of Iowa College of Law

Lawrence Kent, International Programs, Donald Danforth Plant Science Center, St. Louis, Missouri

William Lesser, Professor and Department Chair, Department of Applied Economics and Management, Cornell University

GianCarlo Moschini, Professor and Pioneer Hi-Bred International Chair in Science and Technology Policy, Center for Agricultural and Rural Development, Iowa State University

James F. Oehmke, Professor, Department of Agricultural Economics, Michigan State University

Srividhya Ragavan, Associate Professor of Law, University of Oklahoma Law Center

Joseph Straus, Professor and Managing Director, Max Planck Institute for Intellectual Property, Competition and Tax Law; Chairman, Managing Board, Munich Intellectual Property Law Center (MIPLC), Germany

Shawn Sullivan, Intellectual Property Manager and Counsel (USA), International Maize and Wheat Improvement Center (CIMMYT), CGIAR, Mexico

Antony Taubman, Head, Traditional Knowledge (Global Issues) Division, World Intellectual Property Organization (WIPO), Geneva, Switzerland

Brian D. Wright, Professor, Department of Agricultural and Resource Economics, University of California at Berkeley

Kwon-Soon Yoon, Korea Intellectual Property Research Center, Seoul, South Korea

