

BOOK REVIEW

Kesan Jay P. (Ed.) 2007. *Agricultural Biotechnology and Intellectual Property – Seeds of Change*. CAB International, Wallingford UK, 383 pp. ISBN 13: 978-1-84593-201-5

As indicated in the „Preface“ (p. XIII–XIV) this book contains papers presented at a symposium „Seeds of Change: Intellectual Protection for Agricultural Biotechnology“ held at the University of Illinois at Urbana-Champaign, USA.

In an introduction titled „Seeds of change: a link among the legal, economic and agricultural biotechnology communities“ (p. XVII–XXX) the editor of this book J. P. Kesan explains that farming, which experienced slow but steady changes during the thousands of years, has undergone rapid change during the last 200 years. Genetic engineering used in agricultural biotechnology has provided scientists and breeders genetic engineering tools that allow greatly accelerate plant breeding and is responsible for the positive revolutionary changes in the farming system.

The book contains five parts and twenty four chapters concerning theory, practice and policy problems in agriculture and food industry.

Part I – “Introduction” contains two chapters (p. 1–37): Chapter 1 – “Agricultural innovation after diffusion of intellectual property protection” (p. 1–18) by B. Wright. Chapter 2 – “Seed biotechnology, intellectual property and global agricultural competitiveness” (p. 19–37) – by P. D. Goldsmith, D.K. Nauriyal and W. Peng.

Part II. “Law” contains four chapters (p. 38–96): Chapter 3 – “History and trends in agricultural biotechnology patent law from a Litigator’s perspective” (p. 38–43) – by E. J. Sease. Chapter 4 – “Rules versus standards for patent law in the plant sciences” (p. 44–54) – by M. D. Janis. Chapter 5 – “Constitutional implications of state seed-saving statutes” (p. 55–70) – by A. B. Endres. Chapter 6 – “Patented inventions and externalities: Hohfeldian legal relationships as they apply to pollen drift and other inadvertent use” (p. 71–82) – by M. M. Banik and P.J. Thomassin. Chapter 7 – “Legal constraint of genetic use restriction technologies” (p. 83–96) – by D. L. Burk.

Part III. “Technology” contains three chapters (p. 97–160): Chapter 8 – “Cereal offenders: access and equity in trade negotiations on knowledge resources” (p. 97–131). Chapter 9 – “Public provision of knowledge for policy research: the agricultural biotechnology intellectual property database” (p. 132–140). Chapter 10 – “Network analysis for interpreting patent data: a preliminary, visual approach” by W. Lesser I C. Gomes (p. 141–160).

Part IV “Business” contains four chapters (p. 161–215): Chapter 11 – “The impact of intellectual property rights in the plant and seed industry” by T. Dhar and J. Foltz (p. 161–171). Chapter 12 – “Dynamic pricing mechanism to achieve pareto optimality in a seed production contract” by S. Umeno and J. P. Kesan (p. 172–189). Chapter 13 – “The economic incentive to innovate in plants: patents and plant breeders rights” by G. Moschini and O. Yerokhin (p. 190–203). Chapter 14 – “The strength and structure of intellectual bio-property markets” by S. Buccola and Y. Xia (p. 204–215)

Part V. “Comparative Studies” contains six following chapters” (p. 216–292): Chapter 15 “Insecure property rights and plant varieties: the effects on market for seeds and on farmers in Argentina” by J. P. Kesan and A. A. Gallo (p. 216–230). Chapter 16 – “The regulatory regime and its impact on innovation activities in agro-food biotechnology in the EU and USA” by K. Menrad (p. 231–242). Chapter 17 – “Political economy of intellectual property: re-examining European policy on plant biotechnology” by . D. Graff and D. Zilbermann (p. 244–267). Chapter 18 – “Reality and problems of plant protection under patent law and seedlings law in Japan” by Y. Hiraki (p. 268–272).

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Chapter 19 – “Plant variety protection in the Republic of Korea” by K.-S.Yoon (p. 273–280). Chapter 20 – “Economic assessment of intellectual property rights regulation: the case of Egypt” by J. F. Oehmke and K. M. Maredia (p. 281–292).

Part VI. “International Regulations” contains the following four chapters” (p. 293–372). Chapter 21 “Social and economic consequences of genetic use of restriction technologies in developing countries” by G. Dutfield (p. 293–303). Chapter 22 “Agricultural biotechnology under TRIPS and beyond: addressing social policies in a pro-patent environment” by C. M. Ho (p. 304–319). Chapter 23 “To sow or not to sow” dilemmas in creating new rights in food” by S. Ragavan (p. 320–346). Chapter 24 “Biodiversity and biotechnology: a misunderstood relationship” by J. Chen (p. 347–372).

“Subject Index” (p. 373–383) is quite detailed and allows to find even narrow topic and therefore is very helpful.

Topics of plant protection and plant varieties genetically modified with traits for the purpose of protecting cultivated plants against pathogens, pests and herbicides are discussed in many chapters. Particularly extensively is described the issue of genetically modified potato varieties with Cry genes of *Bacillus thuringiensis* securing resistance against potato tuber moth (*Gnoringoschema operculella*) grown in Egypt. However, the import of such potato varieties has been banned by several European countries causing significant economic difficulties for Egypt.

This collection of 24 chapters on scientific, moral and legal issues raised by genetic engineering covers the diffusion of intellectual property protection under law and global competition, rules and standards for patent law in plant sciences, pollen drift and other inadvertent use, restriction technologies, trade negotiation for knowledge resources.

I recommend this book to all agricultural libraries and to attention of wide circles of specialists in agricultural, horticultural and food science disciplines.

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