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# Economic Analysis of Research and Promotion

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Edited by: Jennifer L. Ferrero Cynda R. Clary Timothy J. Richards

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## Welfare Evaluation of Private R&D for Agricultural Innovations

Giancarlo Moschini Harvey Lapan

### Abstract

This paper reviews the nature of intellectual property rights in agriculture and outlines a modeling framework that accounts for relevant institutional features of agricultural R&D. The analysis emphasizes vertical market linkages in a model where agricultural innovations adopted by farmers are produced upstream by input suppliers. It is argued that the conventional assumption of competitive pricing cannot hold when new technologies are produced by private firms, because such innovations are typically protected by intellectual property rights (such as patents) which confer (limited) monopoly rights to the discoverer. The implications of intellectual property rights for the welfare evaluation of agricultural R&D are derived, and it is shown that conventional methods usually overestimate the welfare gains from agricultural innovations.

#### Note:

A version of this paper, under the title "Intellectual Property Rights and the Welfare Effects of Agricultural R&D," is forthcoming in the *American Journal of Agricultural Economics*, November 1997. The support of the U.S. Department of Agriculture, through a National Research Initiative grant, is gratefully acknowledged. If you would like to contact Professor Giancarlo Moschini, write to the Department of Economics, Iowa State University, Ames, IA 50011.