



AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search

<http://ageconsearch.umn.edu>

aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

No endorsement of AgEcon Search or its fundraising activities by the author(s) of the following work or their employer(s) is intended or implied.



POLICY BRIEF

4

INTELLECTUAL PROPERTY RIGHT AND INDIAN AGRICULTURE : SOME ISSUES

The Background

There is massive evidence to support the fact that appropriate legal protection acts as an incentive for productive research (World Bank, 1990, Strengthening Protection of Intellectual Property in Developing Countries : A Survey of Literature, Discussion Paper, Washington, D.C.). The Uruguay round, which was concluded in 1994, marked the beginning of a significant transformation in the global economic and trade environment. Annex 1 c of the final act deals with the agreement on Trade-Related Aspects of Intellectual Property Rights (Trips). Section 5 (Part II) of the annex pertains to "Patents" under article 27 (Box 1). With reference to agriculture, the text (GATT Secretariat, 1994, The Results of the Uruguay round of Multilateral Trade Negotiations: The Legal Texts, Switzerland) states "Members shall provide for the protection of Plant Varieties by Patents or by an effective sui generis system or by any combination thereof". Since the Indian Patents Act (1970) excluded agriculture and horticulture from patentability, it needs to put into place a sui generis system (Box 2) by evolving a legislation on plant variety protection (PVP) by the year 2000 A.D.

Box 1 : Intellectual Property Rights (IPRs) and Patents'

IPRs refer to the legal ownership by a person or business of an invention/discovery attached to particular product or process which protects the owner against unauthorized copying or imitation. There are seven types of IPR viz., Copyright, Trademarks, Geographical Indications, Industrial designs, Patents, Integrated circuits and Trade secrets.

A patent is a statutory privilege granted by the government to inventors, and to other persons deriving their rights from the inventor, for a fixed period of years, to exclude other persons from manufacturing, using or selling a patented product or from utilizing a patented method or process. At the expiry of the time for which the privilege is granted, the patented invention is available to the general public.

Source: Business Guide to Uruguay Round, WTO, 1995

The 1970 Act was also inadequate in terms of covering processes but not the product patents in food, medicine, drugs and substances provided by chemical processes. It now stands amended through a presidential ordinance (31/12/94) , thus ushering in a new patents regime.

The TRIPs agreement has introduced profound changes which will influence competitiveness, generation and diffusion of technological innovations and ultimately the technological development prospects of developing countries (DCs). The impact of the changes can thus be far reaching, though at this early stage it is difficult to assess the full implications of the agreement. An attempt is made here to consider, in preliminary manner, some possible implications of the new regimes. IPRs constitute an important element of trade negotiations (UNCTAD, 1991, Trade and Development Report, New York.). The GATT accord on TRIPs has raised a whole lot of apprehensions and engaged the attention of intellectuals, politicians, farmers and media for quite sometime now. The legal dimensions of TRIPs make it difficult to understand, and vulnerable to a host of misgivings. Table 1 contains an overview of the types of patent protection allowed by countries organized by the level of income. Some discernable patterns can be identified in areas relating to limited duration, PBR and exclusions. By and large the low income and lower-middle income countries do not accord PBR

and have shorter protection periods. Pharmaceuticals and food stuffs are the most commonly excluded products.

Box 2 : SUI GENERIS : PBR/PVP

The sui generis system is a milder/diluted form of a patent and it provides a framework of plant breeders rights (PBR) through which protection is accorded to the breeders, researchers and farmers with regard to use and exchange of seeds and plant genetic material. Crucially, this framework has two important clauses viz., "Farmers' Privilege" and "Researchers' Rights". The (PVP) legislation will give PBR legal status/statutory rights in the country.

Source: Business Guide to Uruguay Round, WTO, 1995

**Table 1
Overview Of Patent Protection Worldwide as of 1995**

Exclusions from Protection								
Country	Duration of Protection (years)	PBR	Pharmaceuticals	Food Products	Chemical Products	Plant & Animal varieties	Surgical Procedures	Microorganisms & Products there of
Low Income								
Bangladesh	16					X	X	
India	14(20)	(X)	X	X	X		X	
China	15		X	X	X	X	X	
Pakistan	16		X					
Sri-Lanka	15					X	X	
Lower-middle Income								
Mexico	14				X	X	X	
Egypt	15		X	X				
Malaysia	15	X				X	X	X
Philippines	17	X						
Thailand	15		X	X		X		
Upper-middle Income								
Argentina	5,10,15	X	X					
Hungary	20	X	X	X			X	X
Brazil	15	X		X				X
Uruguay	15	X	X		X			
Iran	5,10,15,20		X					
High Income								
Australia	16	X						
Germany	20	X				X	X	
USA	17	X						
UK	20	X				X	X	
Japan	15	X					X	

Source: WIPO (1995) :Nations Ranked according to World Bank National Income Data.

Note : With respect to India, the changes due to the new patents regime are indicated in the parentheses.

Myth and Reality

The debate of the implications of TRIPs began with reference to pharmaceuticals and chemicals. Subsequently, myriad of views has been expressed regarding the possible impact of TRIPs accord on Indian Agriculture.

Issues relating to germplasm and biotechnology are substantial and valid, but these are best pursued independently of the PBR debate. PBR is not a panacea, but can serve the farmers by increasing their access to improved seeds at reasonable prices by augmenting the efforts of public systems through private seed firms (Lesser, W., 1991. Equitable Patent Protection in the Developing World: Issues and Approaches, Eubios Ethics Institute, Chirstchurch, New Zealand.).

Task Ahead

The TRIPs agreement would require substantial changes in the patents regime of our country. Most developed countries, as they are members of the UPOV convention, accord protection to plant varieties. By contrast, only a handful of DCs have sui generis protection systems (e.g., Argentina, Chile, Kenya, the Republic of Korea, Uruguay and Zimbabwe). The PVP legislation proposed to be enacted is modelled (News analysis, Economic Times, February 12 and 15, 1995.) on the basis of the International Union for the Protection of New Varieties of Plants (UPOV) guidelines (World Trade Organization, 1995, Environment and TRIPs; Committee on Trade and Environment Paper, Geneva, Switzerland.) (Box 3, "JPOV 1978 version allowed for the rights of plant breeders and farmers, whereas UPOV 1991 is more stringent in the sense that it disallows both. There is general consensus that we opt for UPOV 1978 and this option is available only till the UPOV 1991 is ratified by at least five member countries. But the just concluded fourth International Conference on Plant Genetic Resources, at Leipzig (Germany), has vindicated the stance of the DCs (FAO, 1996, Global Plan of Action for the Conservation and Sustainable Utilization of Plant Genetic Resources for Food and Agriculture, Final Draft, International Conference on Plant Genetic Resources, Leipzig, Germany.). It succeeded in getting a global endorsement for farmers rights, paving way for the member countries to enact PVP legislation in ways that best serve their respective national interests. The "World Intellectual Property Organization (WIPO) model law for developing countries on inventions" can serve as a general outline for the proposed law on PVP.

Apprehensions*	Realities**
<ul style="list-style-type: none"> Seeds and genetic material have to be patented 	Patenting of seeds optional. Genetic material (like wild varieties, purified varieties, species/genera etc.) not under the purview of IPR regime
<ul style="list-style-type: none"> Loss of farmers right to use and exchange seeds 	Farmers' right to use and exchange seeds ensured.
<ul style="list-style-type: none"> Monopolization and exploitation by seed Trans National Companies (TNCs) 	Can be checked if the oligopolistic market structure of the seed sector is retained with the public institutions playing a major role.
<ul style="list-style-type: none"> Exploitation of genetic resources/ bio-diversity of the DCs by the Developed Market Economies (DMEs). 	Possible in the short term. Can be reversed in the long term by trading - off the genetic resources of the DCs for the biotechnological skills of the DMEs.
<ul style="list-style-type: none"> Cost of patenting beyond the reach of DCs 	Initially yes, but in the long run the economic benefits accruing to the DCs from stronger IPR would be substantial.

* (a) Gill, K.S., 1991. "GATT Issues-Agriculture Sector, Implications of Intellectual Property Rights for India" Monthly Commentary, Dec. :48-53.

(b) Shiva, Vandana, 1992. "The Seed and the Earth biotechnology and the Colonization of Regeneration", Development Dialogue, 1-2.

(c) Menon, Usha, 1990. Impact of TRIPs Negotiations on Agriculture. Brain Storming Workshop, National Working Group on Patent Laws, Part IV, pp 1-5, New Delhi.

- ** (a) UNCTAD, 1993, "Implications of the Draft TRIPs Agreement for Developing Countries as Competitors in an Integrated World Market" New York.
(b) Primo Braga, C.A. 1993. Global Dimensions of Intellectual Property Rights in Science and Technology. National Academy Press, Washington . D.C.

Box 3: Convention for the Protection of New Varieties of Plants

To be eligible for protection, varieties have to be:

- Distinct from existing commonly known varieties;
- Sufficiently homogeneous;
- Stable; and
- New in the sense that they must not have been commercialized.

Like all IPRs, the rights of plant breeders are granted for a limited period of time, at the end of which the varieties protected by them pass into public domain. Authorization from the holder of the right is not required for the use of the protected variety in research, including its use in breeding further new varieties.

Source: UPOV, 1989.

Although, patent laws are inherently a national issue, it is time we join (albeit, selectively) various international conventions/treaties, so that the cost of obtaining patents and /international search reports can be reduced substantially. Also, keeping in view the distinct variation[^] in cost of patenting across nations, there is a case for differential slabs of application fees for foreign applicants seeking patents in our country. Judicious provisions for compulsory licensing and non-voluntary license should be the feature of the proposed legislation to curb possible patent abuses. The proposed PVP has adequate safeguards to take care of farmers, researchers and environmental concerns. It is high time that the proposed legislation is enacted so that this unnecessary irritant in our trade relations, particularly with the DMEs is removed.

Conclusion

The TRIPs agreement aims at a certain minimum standard of IPR protection. Successful implementation of the TRIPs agreement has a number of pre-requisites. The important ones being legal, administrative and institutional reforms, appropriate research investments, and first rate science and technology capability. Provided the IPR protection is adequate and effective (world wide), the TRIPs accord can promote innovations, transfer of technology, foreign direct investment, use of genetic resources and environmental protection. The returns from the economic value of protection system far outweigh its costs. However, while legal protection may be a necessary condition for innovative activities and technology transfer, it is by no means a sufficient condition, given the importance of a host of other factors affecting research investment and the transfer and diffusion of technology in DCs and its ability to internalize benefits from the new rules of the game. The nation's capacity to move from technology importer to technology exporter will be the major determinant of its position in international hierarchy. Foresight demands massive investments in science and technology, oriented towards quality and frontier areas.

Creation of a patent cell in the ICAR, is a step in the right direction. Having a clear-cut intellectual property policy and promoting patent literacy (similar to CSIR) among its scientists, must be the next logical step. A massive awareness program needs to be undertaken to clear doubts regarding the process of patent application and registration, patent information services, inspection of files, determination of national need and the whole gamut of related issues.

To maximize opportunities, DCs must foster and reward entrepreneurship and evolve a regulatory environment conducive to technological innovation. An effective IP regime will provide the synergy between the private and public sector research institutions (UNCTAD, 1994, The Outcome of the Uruguay Round : An Initial Assessment .-Supporting Paper to the Trade and Development Report, New York.). This will then provide a basis for future growth and development, particularly in case of India which has a large pool of scientific manpower.

REFERENCES

1. World Bank, 1990, *Strengthening Protection of Intellectual Property in Developing Countries : A Survey of Literature, Discussion Paper*, Washington, D.C.
2. GATT Secretariat, 1994, *The Result of the Uruguay round of Multilateral Trade Negotiations: The Legal Texts*, Switzerland.
3. UNCTAD, 1991, *Trade and Development Report*, New York.
4. (a) Gill, K.S., 1991. "GATT Issues-Agriculture Sector, Implications of Intellectual Property Rights for India" *Monthly Commentary of Regeneration*", *Development Dialogue*, 1-2

(b) Shiva, Vandana, 1992. "The Seed and the Earth: Biotechnology and the Colonization of Regeneration", *Development Dialogue*, 1-2 .

(c) Menon, Usha, 1990 *.Impact of TRIPs Negotiations on Agriculture*. Brains Storming Workshop, Group on Patent Laws, Part IV, pp 1-5, New Delhi.
5. (a) UNCTAD, 1993, "*Implications of the Draft Trips Agreement for Developing Countries as Competitors in an Integrated World Market*" New York".

(b) Primo Broga, C.A. 1993. *Global Dimensions of Intellectual Property Rights in Science and Technology*. National Academy Press, Washington, D.C.
6. Lesser. W..1991. *Equitable Patent Protection in the Developing World: Issues and Approaches*, Eubios Ethics Institute, Christchurch, New Zealand.
7. News analysis, *Economic Times*, February 12 and 15, 1995
- 8 World Trade Organization, 1995, *Environment and TRIPs; Committee on Trade and Environment Paper*, Geneva, Switzerland
- 9 FAO, 1996, *Global Plan of Action for the Conservation and Sustainable Utilization of Plant Genetic Resources for Food and Agriculture*, Final Draft, International Conference on Plant Genetic Resources, Leipzig, Germany.
- 10 UNCTAD, 1994, *The Outcome of the Uruguay Round : An Initial Assessment : Supporting Paper to the Trade and Development Report*, New York.

September, 1996

A. Ravi Shankar
Ph. D. Scholar
Division of Agricultural
Economics -
Indian Agricultural Research
Institute
New Delhi- 110012.

NCAP has been established by the Indian Council of Agricultural Research (ICAR) with a view to upgrading agricultural/economics research through integration of economics input in planning, designing, and evaluation of agricultural research programmes and strengthening the competence in agricultural policy analysis within the Council.

NCAP Policy Briefs are intended to contribute to the debates on important agricultural policy issues.