ISSUES & CHALLENGES OF INTELLECTUAL PROPERTY RIGHTS IN INDIA WITH SPECIAL REFERENCE TO AGRICULTURE

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ABSTRACT

The present study is an attempt to analyse the overview and impact of intellectual property rights (IPRs) on agricultural innovation in India. This paper examines the patenting activity to identify current innovations in crop farming in India. In the case of granted patents, majority of the patents belong to the area of plant growth. It explores the specificities of patent portfolios and its scope of future innovations in the agriculture engineering sector. But there are still unanswered questions about whether emerging and evolving IPR regimes in developing countries will contribute to enhance agricultural productivity. This paper attempts to answer some of these questions by tracing the effects of IPRs on private investment in crop genetic improvement and in turn, on agricultural productivity. However, the research looks at the prospect of India as a developing country to boost its current intellectual property (IP) framework and legislation in order to develop its agricultural technology. Hence, it focuses on whether there is a single system as a model of IP regime to enhance agriculture production in India. The research is based on secondary data. Intellectual property is in many ways similar to a parcel of real estate. As with any piece of property it can be bought, sold and rented (i.e. licensed). However, unlike real estate, intellectual property is intangible, you cannot touch it, since it is an idea or invention. The legal mechanisms of patents, copyrights, trade secrets and trademarks are used to protect such intangible property. Keep in mind that some contract mechanisms, such as licenses or material contract agreements (MTA's), have the effect of conveying ownership rights over materials. A basic understanding of these mechanisms is essential for anyone whose research may lead to an invention, and for research administrators who must deal with intellectual property issues, both for acquisition and deployment.

KEY WORDS: *Intellectual property rights, patents, trademarks, Copy rights, Agriculture etc.*

INTRODUCTION

Patents

A patent is an agreement between the Government and the inventor. The Government sets statutory standards as to what types of materials may be patented. In some jurisdictions this may include living organisms, in some they may be exempted, and in many the law is silent on the matter. In exchange for a limited-term right (20 years) to exclude others from making, using or selling the potential invention, the inventor must provide a complete and accurate public description of the invention and the best mode of "practicing" it. The public policy basis for this approach is that this provides other members of the public with the ability to use that information to invent further, thus pushing technology forward for the benefit of society. That is, the information is available to all; however, it cannot be used for profit without a license agreement.

This right to exclude means that a patent is a "negative right" since a patent holder may only exclude others from the using, manufacturing, copying or selling his or her invention.

A very important concept in terms of international agriculture is that patents are territorial. A patent in one country generally has no force in other countries. However, products sold in a country, even if they are made outside the patent domain of that country, may infringe a. patent if the product is re-imported into the country where protection is effective. Patent terms vary considerably from country to country, although the PCT provides a mechanism for some harmonization.

There are three basic statutory types of patents: utility, design, and plant:

A utility patent
is the type with which most people are familiar, and it is granted for any new and useful process, machine, manufacture or composition of matter or any new or useful improvement thereof. In simple terms, it has to be USEFUL.

A design patent
protects a new, original and ornamental design for an article of manufacture

A plant patent
protects a new and distinct, asexually reproduced variety of plant.

Maintenance fees on utility patents must be paid at 4, 7 and 11 years after the date of issue or the patent will expire. Once a patent expires, the invention is in the public domain and anyone may use it without authorization from the patent holder.

What then are the key issues that arise in discussions on patenting in agriculture, that impact globally, but perhaps have even greater impact in the developing world?

1. Should living organisms be patented at all?
2. What is the role of other legal mechanisms, such as plant variety protection?
3. How far does the research exemption flow?
4. What is commercial sale?
5. What about the ability to reproduce for own use, ie farmer seed?
6. Is the cost prohibitive for small companies, developing countries, and public sector?

Trade Secrets
A trade secret is any formula, pattern, device, process, tool, mechanism, compound, etc., of value to its owner, which is not protected by a patent and is not known or accessible to others. As long as it is kept secret, the owner may obtain a great deal of commercial benefit.

This form of protection is a weak mechanism, in as far as once the secret is out it's too late! There are several issues that arise from the application of trade secrets, including:

1. Is it appropriate for public organizations to keep information secret?
2. What are the costs associated with maintaining secrecy?
3. How to deal with movement of staff who are aware of the secrets?
4. Interaction of trade secrecy with other legal instruments, such as freedom of information acts, or disclosures for regulatory matters, such as field-test permits.

Copyrights
In contrast to a patent, which protects an idea and its implementation, copyright protects the expression of an idea, not the idea itself. Such expression must be in some retrievable form such as handwriting, set in type, recorded on magnetic tape or other storage medium. Copyright covers the expression in literary or musical works, computer programs, video or motion pictures, sound recording, photographs, and sculpture. Unlike patents, copyrights automatically come into being when the idea is fixed in a tangible medium of expression.

While no longer required by law, it is still useful to apply a copyright notice to the work. The notice should include the familiar ©symbol or the word "copyright," the year of first publication and the name of the owner of the copyright.

The owner of the copyrighted work has the exclusive right to control copying, adaptations, and distribution of copies, public performances and public displays. In the "fair use doctrine," others may use a copyrighted work in limited ways for criticism, comment, news reporting, teaching, scholarship or research without infringing".

The area of copyright law is one that has been very active over the last decade. There is apparent strengthening of the copyright enforcements by the courts, such as the Napster music case, where there was an apparent narrowing of the fair use doctrine. Given the application of copyrights to protect other data important to agriculture such as genome databases, meteorological data, GIS images, etc. there are many issues arising from this area of IPR protection.

The major issues that will need further dialog include:

1. Copyright on databases, implications for genomics.
2. Clear position on "fair use", how does this impact on research?
3. Global agreements on copyright enforcement
4. How much modification is required to indicate that information is novel?
5. Impact of the internet on copyright, and fair use

Trademarks

A trademark is a word, name, symbol or device used by a person or legal entity to identify their goods and distinguish them from others. Commercial logos are common examples of trademarks. Trademark rights can be asserted by using the familiar trademark indicator™ in association with particular goods or services. Trademarks play a critical role in the development of an "image" for a product or service. This leads to the IP concept of "branding". Branding has been used in the agricultural sector extensively over the years, from seed companies, food and drink manufacturers, and even developing country commodity associations, such as the Colombian coffee growers effective use of the brand name "Juan Valdez".

Branding, or trademark protection again raises issues for the global agricultural sector, these include:

1. Agricultural product branding and the effect on markets
2. Globalization of marketing
3. Quality control and brand image
4. Use of indigenous terms in a brand, ie Jasmine or Basmati
5. Costs associated with branding

Having covered the basic elements of the current IP regimes and the issues that they raise for those with an interest in agricultural research and development, let us now go on and look at some of the crucial interfaces of IPR mechanisms in biotechnology, and the interplay between IPR and other structural economic matters such as trade.

Opportunities and Constraints of the IP mechanisms on Agricultural Biotechnology in Developing Countries There is no doubt that IPR is having a substantial impact on investment in biotechnology in the industrial world. This raises questions of technology access and product pricing. The development of this new proprietary science raises both opportunities and problems for those in the developing world. These include:

Opportunities:

A number of potentially valuable opportunities derive from the growth of proprietary science, these include:

1. Access to new science.
2. Development of commercial type relationships.
3. Development of new partnerships.
4. Novel delivery mechanisms for new products.
5. Increased value / income for re-investment in science.

Problems / Constraints:

There are of course potential negatives to the development of proprietary science, these include:

1. Access problems.
2. Dealing with exclusive licenses.
3. Liability Issues.
4. Terms and Conditions of Access.
5. Cost of access.
6. Failure to establish humanitarian license terms.

IPR And Trade

Heated debates, occasionally literally in flames, have fueled the development of the regional and international trade pacts. We have seen the growth of trade related legislation and organizing bodies such as APEC (Asia Pacific Economic Community) and NAFTA (North America Free Trade Association). We also witnessed the formation of the World Trade Organization (WTO) as a forum for these matters.

Globalization of the world economy, and the massive increase in global trade has led to the application of rules and regulations relating to intellectual property also at a global level. The so-called TRIPS [Trade-Related Aspects of Intellectual Property Rights (General Agreement on Tariff and Trade -(GATT/WTO)] provisions have brought the

concept of IP protection front and center in trade matters.Trade related IP matters involving agricultural products are increasingly common, and in some cases the arguments are between nations who hardly even produce the materials, i.e., the banana wars between the USA and Europe.

There is an increasing focus on the use of non-tariff barriers to trade. This may take a variety of forms, from plant quarantine issues, to biosafety concerns, to genetic resource flow concerns. If we see the current impasse on GMO foods between Europe and the USA, this has already flowed to a series of discussions with governments in Africa and Asia, where clearly links are drawn between the ability to export GMO foods and the IP that controls the ownership and expression of those genes.Through a variety of international conventions IP has become a global, trade related practice. The barriers that once clearly made patents a national (territorial) matter have been substantially blurred in recent years.

Major Constraints and Opportunities Constraints:
There is a continuing constraint of information to both policy makers and the general public as to the advantages and disadvantages of IPR regimes and trade matters. This is in part due to the polarity of the issues, and the vested interests of the various groups that are putting forward their positions. This lack of information, in a useable format, allows various interest groups to take the limelight and spread their own message, irrespective of the facts. We need a balanced debate. It is hoped that the current document will serve to assist that dialog, and lead to the production of some form of consensus document that indicates areas where there is general acceptance of a position. It should also show which areas are still in dispute.

There is a need to work during a time of unprecedented rate of change. Current regulatory structures and existing national legislation are often unable to deal with the speed and nature of the trade related changes that are ongoing. Despite the lead times to enact legislation for WTO compliance many countries find themselves passing hasty legislation simply to avoid punishments for non-compliance.

Global litigation of trade matters, although necessary in the current framework, is slow and costly and as such again favors the large entity over the small entity. More efficient mechanisms must be devised for dispute resolution.

Opportunities:
New technologies and new trading relationships offer tremendous opportunities for new growth, including the rapid expansion of new markets being available to developing countries. There is still a need for greater access to markets. Creativity should also be encouraged to develop new mechanisms to allow for economic growth, particularly associated with the poorer sectors of society. New markets provide the opportunity for greater diversification, greater output and as such more and better employment opportunities. Clearly greater access to markets creates internal competitive pressures that in a positive environment can be translated into increased efficiency and higher productivity. The initial impetus must be focused on the developing world gaining greater access to industrial markets. This will in turn lead to greater general market access, benefiting all parties concerned. Again, the use of innovative partnerships, particularly in the private sector, will be crucial to the success of this transformation process.

Conclusions to Identified Constraints: -
Despite the complexity of these issues, I will try to distill a list of key discussion points that are worthy of further dialog. There are often no concrete conclusions or resolutions that can be brought to bear on these matters. We should not search for black and white in an area that is perhaps gray by nature. But let us discuss and debate the following: While the author offers his own comments on these points, there will be a need to refine these positions based on the additional inputs to the debate.

What can be done to enhance the debate over the harmonization and costs of patenting?
A more proactive stance is required from the scientists and policy makers. There will be substantial support from the private sector to make these types of changes. More training and education are required for institutions to develop strategies that will keep down patent costs by selecting the focus countries of the technology. The use of innovative partnerships, where the partners share or bear all of the costs of filing is also important.

What can be done to evaluate the impact of private investment in agricultural research and product development?
Some work in this area has already been undertaken by a number of organizations, including the World Bank and IFPRI. More studies are required, and are needed across a range of models. The focus should not be per se on the major agricultural multinationals, but also on the small venture capital seed companies in the developing world.

What can be done to ensure equity to those who provide the raw materials so crucial to new product development in agriculture?
There is still an ongoing debate as to how to provide "benefit sharing" to those persons or communities that have served as "inventors" or "holders" of technology. The Government of Thailand has recently passed legislation that tries to link benefit sharing to PVP. This mechanism, while containing some problems of international acceptability, has merit and is worthy of further study.

How can IPR be balanced and integrated with other areas of product development such as regulatory review?
More integrated training is required to deal with the whole issue of "product stewardship", there are a wide range of different issues surrounding product deployment that need to be teased apart, then reintegrated to meet both local and global standards for food and health.

How can greater understanding and human capital be developed in this area?
There is a massive need in this area. There should be more focused education at the University level on IPR and the development of business activities. Scientists should also be made aware of the enabling environment that can be associated with effective IP management.

How can the ethical matters associated with these issues be debated and addressed?
More effort is needed to get these issues onto the agenda of those that deal with issues of ethics and science. The FAO has a key role to play in this area. Just because the science exists that something can be done, does not mean that it has to be done.

How can International and National Public Goods be developed and deployed most effectively?
There is a need for the broader dissemination of public science. That science may at times need to be packaged in a form that makes it attractive to a broader range of clients. There should also be creative use of licenses and partnerships to ensure update of public goods.

What role do International Organizations such as FAO, WIPO and WTO play in this debate?
Clearly a key role exists for these organizations. There is however a need to get beyond the "mere words" and develop innovative programs of education, partnership, and science development that can test the various models that may exist to use IP as a mechanism to enhance technology transfer to the developing world.

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