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PATENTS AND COPYRIGHTS IN AGRICULTURE INNOVATION

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ABSTRACT

The present study is an attempt to analyse the overview and impact of intellectual property right in 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 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.



KEY WORDS: Agricultural innovation, intellectual property rights, Patents, Copyright.

Introduction :

In 2002, the UK company Plant Bioscience patented a procedure through the European Patent Office for the identification of broccoli plants that have an increased glucosinolate content. That patent, however, encompassed not only the use of special marker genes to breed broccoli, but also the vegetable plants and the broccoli seed obtained by means of this process. The seed and biotech firms Limagrain and Syngenta have filed oppositions to the patent. In general, Syngenta supports the wide-ranging patenting of breeding processes, and its purpose in bringing the case to court is presumably not to have it revoked, but in fact confirmed. Farmers' groups and development organisations, in contrast, stand in opposition to such undermining of the patent law.

Similarly far-reaching patents have been applied for in the field of animal breeding. In April 2009, farmers' groups and development organisations protested against the 'pig patents' applied for by Monsanto . They cover a gene test that can be used to identify pigs that grow and put on flesh particularly quickly. Monsanto. further applied for patent protection of the animals selected by means of this method.

Intellectual property rights (IPRs) can be broadly defined as legal rights established over creative or inventive ideas. Such legal rights generally allow right holders to exclude the unauthorized commercial use of their creations/inventions by third persons. The rationale for the establishment of a legal framework on IPRs is that it is a signal to society that creative and inventive ideas will be rewarded. This paper will in the next section distinguish the IPRs relevant to agriculture and explain these rights. In Section III the international intellectual property law for these rights will be described. Section IV sets out India's international obligations vis-a-vis her own IPR laws and Section V goes on to an analysis of the public debate in India on the controversial IPRs and the status of the legislation on these. This paper concludes in Section VI with prescriptions for public policy on IPRs and agriculture in India.

INTELLECTUAL PROPERTY RIGHTS (IPRS)

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Today patent is one of the important tool of IPR for agriculture goods and services by providing strongest protection for patentable plants and animals and biotechnological processes for their production.

IPRs RELEVANT TO AGRICULTURE:

Several of the IPRs mentioned above are relevant to the agricultural sector in that they can be used to protect goods or services produced in the agricultural sector.³ These are mainly patents, plant breeders' rights, trademarks, geographical indications and trade secrets. It is possible to include lay-out designs for chips that are designed to perform certain functions related to agriculture, but these are assumed to be incorporated in machines produced in the industrial sector. Similarly, scientific papers or television programmes covering ideas related to agriculture are not seen as directly being produced in this sector.

Biotechnology is the sector that holds the most potential for advances in agriculture to improve productivity. Biotechnology R&D is mostly concentrated in the hands of large multinational enterprises in the US, Europe and Japan. It is in this field of technology more than others, that proprietary rights over knowledge is getting increasingly important. Today, in the United States, patents are even granted to animal inventions and human gene sequences, if these are eligible for such protection. The case law in the United States developed rapidly since the early '80's with the grant of a patent for a bacteria that 'ate' oil spills. This gave rise to the patenting of micro-organisms found in nature, if it involved a new, inventive and useful technical intervention by man. Another landmark case was the patent granted to the 'Harvard oncomouse', useful in research on cancer. The European Union has been slower to follow suit on the patenting of plants and animals due to the opposition it faced from environmental activists in the European Parliament. This has now been largely overcome with the imminent finalization of the new Biotechnology Directive by the European Parliament, authorizing the grant of patents to plants and animals, with limited exceptions. Thus, research on the cloning of animals, which is advancing rapidly, would be eligible for patents in at least some developed countries. Many countries have developed plant breeders' rights to reward conventional plant breeding efforts. Such sui generis protection is weaker than patent protection in that the right holders can



only prevent third parties from commercially exploiting the protected material. The criteria used to grant such protection is also lower than that used to determine patentability as these are distinctness, i.e. distinguishable from earlier known varieties, uniformity i.e. display of the same essential characteristics in every plant and stability i.e. the retention of the essential characteristics on reproduction. Such protection encourages breeding efforts in the private sector. These are marks associated with products originating from a country, region or locality where the quality, reputation or other characteristics of the product are essentially attributable to its geographical origin. Most geographical indications relate to agricultural products or those derived from them, as in the case of wines and spirits. Protection of such marks prevents third parties from passing off their products as those originating in the given region. Famous examples are 'Champagne' for sparkling wine and 'Roquefort' for cheese from areas of these names in France or 'Darjeeling' for tea from this district in India. It is not necessary for these indications to be geographical names as in the case of 'Feta' for cheese from Greece or 'Basmati' for rice from India and Pakistan as there are no places, localities or regions with these names. Plant varieties developed with traditional knowledge and associated with a particular region can also be protected as geographical indications. The advantage in such protection is that it is not time-limited, unlike the case of plant patents or plant breeders' rights. The advantage, at least to the proprietor, is that, unlike patents, there is no obligation to di

INDIA'S INTERNATIONAL OBLIGATIONS ON IPRs:

India is not yet a Member of the Paris Convention or the UPOV. However, India is a founder member of the WTO and is therefore party to the TRIPS Agreement which came into force on 1.1.1995. Being a developing country, India is entitled to a transition period of five years up to 1.1.2000 for most provisions of TRIPS. An important exception is the introduction of product patents in areas of technology not covered so far, for which time is available up to 1.1.2005. Nevertheless, the so-called process-by-product patents with the reversal of burden of proof would have to be in place by 1.1.2000. At present the Patents Act, 1970 does not allow the patenting of plants or animals or micro-organisms. Although it does not contain any such specific exclusion, the definition of an invention seems to exclude these. Even microbiological processes are excluded if they involve a



method of agriculture or horticulture, as such methods are specifically excluded. However, such applications have sometimes been granted patents, at least since the mid-80's as is evidenced by the process patent granted to Agracetus, a US company, on genetically engineered cotton cells and lines.

In the case of geographical indications, the Trade and Merchandise Marks Act, 1958, allows for the registration of certification marks, certifying quality or origin of a product. Such certification marks can be registered by anybody not producing the particular product, as, for instance, any association of producers or traders. In addition, geographical indications are protected under the common law tort of passing-off. Marks such as 'Champagne' for sparkling wine from France and 'Scotch' for whisky from Scotland have been successfully protected under this. However, India would need to legislate in order to give the higher level of absolute protection to wines and spirits required under TRIPS. In doing so, other Indian products or those of interest to India's trading partners can also be given this higher level of protection, perhaps on the basis of reciprocity.

EIGHTY YEARS OF INTELLECTUAL PROPERTY RIGHTS IN AGRICULTURE

Since genetic engineering became a part of breeding activities some 25 years ago patents on plants and animals or their parts, such as genes or gene sequences, have gained an increasingly important role. This development has attracted criticism, especially from civil society groups worldwide. Intellectual property rights (IPR) in agriculture have existed for almost 80 years. In 1930 the USA enacted the first law in this area, which made it possible to patent plants that were propagated vegetatively through bulbs or cuttings. A different path was taken in Europe. The UPOV Convention of 1961 established protection of intellectual property rights for plant breeders, whilst at the same time permitting other breeders to use the material free of charge for their own breeding purposes (plant breeders' privilege). The traditional practice of farmers of breeding and exchanging seeds could also comprise the new, protected varieties since UPOV 1961 did not forbid such activities. This farmers' privilege had been recorded in writing in the 1991 version of UPOV, but with substantial restrictions. With these two privileges concerning the access to protected material, plant variety protection differs distinctly from patent law. However



pressure is mounting from the biotechnology industry to align the level of protection in the field of plant breeding with patent law.

This conclusion also applies explicitly to plant breeder rights. Breeders of agricultural crop species were using such rights to protect their intellectual property long before patents were possible in this sector. According to the CIPR, the actual beneficiaries of IP rights are the seed industry and commercial farmers. Developing a commercial seed sector will not improve conditions for subsistence farmers. If IP protection systems are to foster innovation in the developing world, they need to be adapted to the specific circumstances on the ground. The trend towards high uniform standards mainly serves the trade interests of industrialised nations. This is the conclusion of a World Bank report published in 2006.

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