

III. Implementation of the TRIPs Agreement in India

The establishment of the patent system in India commenced in 1856 with the Act of Protection of Inventions based on the British patent law of 1852.²¹⁰ The Patent Act of India of 1911 allowed patenting of food, pharmaceuticals and chemicals. After India gained independence in 1947, a new Patent Bill was tabled in Parliament in 1965 and was reintroduced in 1967, resulting in the Patents Act of 1970 becoming effective on April 20, 1972. It excluded food from patentability:

"In the case of inventions claiming substances intended for use, or capable of being used, as food or as medicine or drug (...) no patents shall be granted in respect of claims for the substances themselves, but claims for the methods or processes of manufacture shall be patentable."²¹¹

Food was defined as "any article of nourishment (including) any substance intended for the use of babies, invalids or convalescents as an article of food or drink."²¹² Food-related substances had been excluded from patentability. The term of protection of food-related processes was restricted to 7 years from the filing date of the complete specification. The existing patents on food were transformed to "licenses of right":

"Every patent in force at the commencement of this Act in respect of inventions relating to substances used or capable of being used as food or as medicine or drug shall be deemed to be endorsed with the words "Licenses of right"(...)."²¹³

Licenses of right had the effect that "any person who is interested in working the patented invention in India may require the patentee to grant him a license for the purpose on such terms as may be mutually agreed upon (...)."²¹⁴ The remuneration however, was limited to a maximum of 4% of the net ex-factory sale price of the patented article.²¹⁵ Finally, methods of agriculture and horticulture were not considered an invention and therefore were not patentable.²¹⁶

210 *Mukherjee*, The Journey of Indian Patent Law towards TRIPS Compliance, IIC 2004, 125.

211 Sec. 5(1)(a) of the Indian Patent Act of 1970.

212 Sec. 2(1)(g) of the Indian Patent Act of 1970.

213 Sec. 87(1)(a)(i) of the Indian Patent Act of 1970.

214 Sec. 88(1) of the Indian Patent Act of 1970.

215 Sec. 88(5) of the Indian Patent Act of 1970.

216 Sec. 3(h) of the Indian Patent Act of 1970.

India for years strictly refused to negotiate about patent protection, but finally embraced the "macro-economic marriage of convenience"²¹⁷ provided by the TRIPs Agreement. Many Indians have acknowledged the beneficial effects of the TRIPs Agreement:

"There is only one aspect as regards property rights. We have to change the patent laws and patent laws will now cover food, pharmaceuticals and chemicals. (...) In ten years both the tariff on textiles and the quota system are envisaged to be abolished. All I am trying to convey is that this Agreement, on the whole, will be beneficial for our country (...)."218

The TRIPs Agreement has generated a controversy in India. Although most people are aware of the TRIPs Agreement, its full implications with respect to patents on food are not understood by many, as demonstrated by the following quotation showing the prevailing fears in India today.

"Intellectual property rights will deprive us of our basic right to exchange seeds amongst each other, which has for decades served as major catalyst for stimulating agricultural growth. It has been the source of indigenous innovation for centuries in India. The government is selling our indigenous knowledge and information networks to foreign companies, as can be seen in the case of the neem tree. In India, the neem tree has been used for centuries in the fields as a pesticide and at home as a herb to cure common colds. But today, it has become the property of U.S. company, who has patented its properties to use as a pesticide. We see this as a modern form of colonization by the West."²¹⁹

India is obliged to meet all the provisions of the TRIPs Agreement from January 1, 1995. India has been classed as a developing country in WTO terms, and thus enjoys the complete term of the transition period of ten years to introduce the patentability of food January 1, 2005. India is required to implement exclusive marketing rights according to Art. 70(8) and (9) of the TRIPs Agreement with respect to pharmaceuticals and agrochemicals during the transition period.

217 *Straus*, Implications of the TRIPs Agreement in the Field of Patent Law, in: *Beier&Schricker* (eds.), From GATT to TRIPs – The Agreement on Trade-Related Aspects of Intellectual Property Rights, Weinheim 1996, pp. 160, 168 citing *Primo Braga*, The North-South debate on Intellectual Property Rights, in: *Smith* (ed.), Global Rivalry and Intellectual Property – Developing Canadian Strategies, Halifax 1991, 173, 177.

218 *Barooha*, Prolegomena, in: *Bhoral* (ed.), GATT Agreement or Dunkel Draft Treaty – Its Impact on Agriculture Industry – TRIPs and TRIMs and Drug Industry, New Delhi 1994, 1, 3, *Straus*, Implications of the TRIPs Agreement in the Field of Patent Law, in: *Beier&Schricker* (eds.), From GATT to TRIPs – The Agreement on Trade-Related Aspects of Intellectual Property Rights, Weinheim 1996, 160, 169, No. 37.

219 Spokesman for the Andhra Pradesh Agricultural Labourers Federation, in: *Gallagher*, Guide to the WTO and Developing Countries, London etc. 2000, 248.

The first amendment to the Indian Patent Act of 1970 was enacted in 1999 entering into force retroactively from January 1, 1995.²²⁰ The U.S. requested consultations on India's compliance with the mailbox facility provision and the provision on exclusive marketing rights for pharmaceuticals and agrochemicals on July 2, 1996 before the Dispute Settlement Body (DSB) of the WTO.²²¹ The DSB established a panel which found that India has not complied with its obligations under Art. 70(8)(a) or Art. 63(1) and (2) TRIPS by failing to establish a mechanism that adequately preserves novelty and priority in respect of applications for product patents for pharmaceutical and agricultural chemical inventions, and was also not in compliance with Article 70(9) of the TRIPS Agreement by failing to establish a system for the grant of exclusive marketing rights. India appealed certain issues of law and legal interpretations developed by the Panel. The Appellate Body upheld, with modifications, the Panel's findings on Art. 70(8) and 70(9).²²² India undertook to comply with the recommendations of the DSB within the implementation period that expired on 16 April 1999. At the DSB meeting on 28 April 1999, India presented its final status report on implementation of this matter which disclosed the enactment of the relevant legislation to implement the recommendations and rulings of the DSB.²²³ Food was not particularly addressed in the judgement. The exemption of food in the Indian Patent Act occurred only in the context of pharmaceuticals and agrochemicals. Thus, the Indian Minister for Industry was asked by the panel whether applications for product patents in the pharmaceutical, food, and agricultural chemical areas had been received in anticipation of changes in the Indian Patents Act 1970 in accordance with the requirements of the World Trade Organization. The Minister responded by stating that the patent offices had received 893 patent applications in the field of drugs or medicine from Indian as well as foreign companies or institutions as of July 15, 1996.²²⁴ Exclusive marketing rights were introduced only with respect to pharmaceuticals, but not for food.²²⁵

220 *Ganguli*, Towards TRIPs Compliance in India: The Patents Amendment Act 1999 and Implications, 21 World Patent Information 279 (1999).

221 India – Patent Protection for Pharmaceutical and Agricultural Chemical Products, September 5, 1997, World Trade Doc. WT/DS50/R.

222 India – Patent Protection for Pharmaceutical and Agricultural Chemical Products, December 19, 1997, World Trade Doc. WT/DS50/AB/R.

223 Available at www.wto.org/english/tratop_e/dispu_e/cases_e/ds50_e.htm.

224 India – Patent Protection for Pharmaceutical and Agricultural Chemical Products, September 5, 1997, World Trade Doc. WT/DS50/R, No. 2.6.

225 WTO, India- Patent Protection for Pharmaceutical and Agricultural Chemical Products, Report of the Appellate Body, adopted 16 January 1998, Doc. WTO/DS50/AB/R.

The second amendment²²⁶ in continuation of the first amendment of 1999 harmonized the patent term to 20 years irrespective of the field of technology. Moreover, it introduced the publication of the patent application 18 months after filing and a reversal of the burden of proof for patents pending in court. Plants and animals were excluded from patentability, including "plants and animals in whole or any part thereof other than microorganisms but including seeds, varieties and species and essentially biological processes for production or propagation of plants and animals."²²⁷

Protection for plants is provided under the Protection of Plant Varieties and Farmers Rights Act of 2001.²²⁸ India has made full use of the options of Art. 27(3)(b) of the TRIPs Agreement. It established a *sui generis* system for the protection of plant varieties. In contrast to Brazil and China, India's *sui generis* system is not in compliance with UPOV.²²⁹ Though India is not yet a Member of UPOV, the reason for India's solo attempt might be "the necessity of protecting the rights of farmers in respect of their contribution to conserving, improving and making available plant genetic resources for the development of new plant varieties."²³⁰ Any plant variety "which involves any technology which is injurious to the life or health of human beings, animals or plants"²³¹ is excluded from plant variety protection, including genetic use restriction technologies and the terminator technology. The third amendment to the Indian Patent Act of 1970 was enacted on April 5, 2005, entering into force retroactively from January 1, 1995. It led to an abolition of the exemption to patentability of food.²³² Henceforward, food is patentable as mandated in Art. 27(1) of the TRIPs Agreement. India's patent system is now largely compliant with the TRIPs Agreement.

226 Ganguli, Intellectual Property Rights - Unleashing the Knowledge Economy, New Delhi 2001, Bhattacharjee *et al.*, Basmati Rice: A Review, 37 International Journal of Food Science and Technology 1 (2002).

227 Sec. 4(e) of the Indian Patent Act of 2002. The Patents (Amendment) Act, 2002, No. 38 of 2002, of June 25, 2002, available at www.patentoffice.nic.in/.

228 Act 53 of 2001, available at www.genecampaign.org/india-pvp-2001-en.pdf.

229 Especially the farmers' rights provisions and the strong public interest clauses seem to be contrary to UPOV, Sahai, India's Plant Variety Protection and Farmers' Rights Act, 2001, 84 Current Science 407, 411 (2003).

230 Sahai, India's Plant Variety Protection and Farmers' Rights Act, 2001, 84 Current Science 407, 411 (2003).

231 Sec. 29(3) of the Plant Varieties and Farmers Rights Act of 2001.

232 Sec. 5 of the Indian Patent Act of 1970 was deleted. The Patents (Amendment) Act, 2005, No. 15 of 2005, of April 5, 2005, available at www.patentoffice.nic.in/.

IV. Consequences of the patentability of food

The effects of the patentability of food are reflected in the use of the national patent systems in Brazil, China and India.²³³ Food-related patent applications act as an indicator of the technological and economical performance in the food sector. According to Director General of WIPO *Idris* “patents are a key measure of the extent and success of an innovation culture. They can be used to measure the level of R&D activities, and ultimately, how effective those are, what structure they are taking, and which industries appear to be successful, and which not.”²³⁴

1. Rise of food-related patent applications

Table 5 shows the development of food-related Brazilian, Chinese and Indian patent applications. Table 5 shows the sum of national and foreign applications.

233 On the general benefits of the implementation of the TRIPs Agreement in India and China see *Straus&Klunker*, Harmonisierung des internationalen Patentrechts, GRUR Int. 2007, 91, 100 s.

234 *Idris&Arai*, The Intellectual Property-Conscious Nation: Mapping the Path From Developing to Developed, WIPO Publication No. 988(E) (2006), 13. For further information on the economic influences of patents, see *Straus&Klunker*, Harmonisierung des internationalen Patentrechts, GRUR Int. 2007, 91, 100.