II. Contents with respect to food

Art. 27 of the TRIPs Agreement states that "patents shall be available for any inventions, whether products or processes, in all fields of technology, provided that they are new, involve an inventive step, and are capable of industrial application" and are sufficiently disclosed in the patent application.[168] Thus, patent protection must be extended to food.

An invention may be excluded from patentability if its commercial exploitation is against the public order or morality concerning human, animal, and plant life and health, or to avoid serious harm to the environment.[169] The exemptions to patentability must not be based only on national prohibition laws. Thus inventions in the field of plants and animals are discriminated against, in comparison to other fields of technology, by Art. 27 (3)(b) of the TRIPs Agreement. This provision allows the exemption to patentability of plants and animals and essentially biological processes for their production, codifying a contra-exemption for non-biological and microbiological processes.

Developing countries were obliged to implement the TRIPs Agreement within 10 years and to provide patent protection for pharmaceuticals, chemicals, microorganisms and food. A mailbox facility and exclusive marketing rights were a partial compensation for these long transition periods.[170] Under the mailbox provision, patent applications during the transition period must be accepted by the respective Member and stored until the introduction of the patent system. These patent applicants can claim the date of the "mailbox" application as a priority date in the later examination process. The mailbox facility of Art. 70(8) of the TRIPs Agreement is limited to pharmaceuticals and agrochemicals and does not apply to food.[171] Article 70(9) of the TRIPs Agreement provides for exclusive marketing rights, but again only to pharmaceuticals and agrochemicals, as these are of utmost importance. It provides temporary protection until the respective patents are examined.

168 Art. 29(1) of the TRIPs Agreement. This provision ensures that patents are granted on a more rational basis. "Der vollständige Ausschluss der Patentierbarkeit kommt gerade bei nützlichen Erfindeungen, deren freie Verfügbarkeit gesichert werden soll, nicht mehr in Betracht." *Rott*, Patentrecht und Sozialpolitik unter dem TRIPS-Abkommen, Baden-Baden 2002, 335.

169 Art. 27(2) of the TRIPs Agreement.

170 Art. 70(8) and 70(8) of the TRIPs Agreement.

171 *Maskus,* Intellectual Property Rights in the Global Economy, Institute for International Economics 2000, 25. However, Art. 70 (8) TRIPs does not constitute the obligation not to reject the patent application on a pharmaceutical or an agrochemical as of 2005; *Hohmann*, Die WTO-Streitbeilegung in den Jahren 1998-1999, EuZW 20000, 421, 426. For the economic implications of Art. 70(8) TRIPs see *Bronckers*, The Impact of TRIPS: Intellectual Property Protection in Developing Countries, Common Market Law Review 31 (1994), 1245, 1253.

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.[172] Violations of the Art. 27, 65 and 70 TRIPs were claimed. 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. On 15 October 1997, India notified its intention to appeal 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).[173] At the DSB meeting of 22 April 1998, the parties announced that they had agreed on an implementation period of 15 months from the date of the adoption of the reports i.e. it expired on 16 April 1999. India undertook to comply with the recommendations of the DSB within the implementation period. On 14 January 1999, the US requested consultations with India in accordance with Art. 21(5) of the DSU regarding the Patents Amendment Ordinance of 1999 promulgated by India to implement the rulings and recommendations of the DSB. 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.[174] 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 Minster 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.[175]

As developing countries have to provide neither a "mailbox" facility nor exclusive marketing rights with respect to food, food remains *de facto* excluded from patentability until the expiration of the transition period.

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

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

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

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

Developed countries were required to fully implement the TRIPs Agreement as of January 1, 1996,[176] while developing countries and emerging countries were given a transition period until January 1, 2000.[177] Longer transition periods were provided for least-developed countries until January 1, 2004 and, according to a recent decision of the WTO's TRIPs Council, until July 1, 2013.[178] This decision does not affect the transition period for patents for pharmaceutical products, which was agreed in 2002.[179] Consequently, least-developed countries will not have to protect these patents until January 1, 2016.[180]

Developing countries having to introduce patent systems on inventions that were excluded from patentability were given a transition period until January 1, 2005.[181] Least-developed countries have to provide patent protection for pharmaceuticals as of according to the WTO ministerial conference in Doha in 2001.[182] During this transition period, Members were only allowed to change their patent systems if these changes were in accordance with the TRIPs Agreement.[183]

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176 Developed countries could often not comply with this rather short one year transition period. *Doermer*, Dispute Settlement and New Developments Within the Framework of TRIPS – an Interim Review, 31 IIC 1 (2000).

177 Art. 3, 4 and 5 TRIPs codifying national treatment and most favored nation principle were exempted of the transition periods. It was furthermore acknowledged in India - Patent Protection for Pharmaceutical and Agricultural Chemical Products, Report of the Appellate Body, adopted 16 January 1998, Doc. WTO/DS50/AB/R, 7.46 that the transition periods were not applicable to the procedural provisions of Art. 63 and 64 TRIPs, *Doermer*, Dispute Settlement and New Developments Within the Framework of TRIPS – an Interim Review, 31 IIC 1 (2000), *Macdonald-Brown/Ferera*, First WTO Decision on TRIPs, EIPR 1998, 69, 72 s, *Rott*, Patentrecht und Sozialpolitik unter dem TRIPS-Abkommen, Baden-Baden 2002, 134 ss. Some authors seem to be of the opinion, that the transition periods were the only concession made to the developing countries: *Cottier*, The Prospects for Intellectual Property in GATT, Common Market Law Review 1991, 383, 400, *Primo Braga*, Trade-related Intellectual Property Issues: The Uruguay Round Agreement and its Economic Implications, in: *Martin&Winters* (eds.), The Uruguay Round and the Developing Countries, Cambridge 1996, 341, 355, *Faupel*, GATT und Geistiges Eigentum, GRUR Int. 1990, 255, 266.

178 World Intellectual Property Report 01/06, 14, 15. The criteria for classing as least developed countries is explained in *Rott*, Patentrecht und Sozialpolitik unter dem TRIPS-Abkommen, Baden-Baden 2002,146 ss.

179 WTO, Intellectual Property: Poorest Countries Given More Time to Apply Intellectual Property Rules, WTO:2005 Press releases Press/424 of November 29, 2005.

180 WTO, Intellectual Property: TRIPS and Public Health – Council Approves LDC decision with Additional Waiver, WTO 2002 Press release Press/301 of June 28, 2002.

181 Art. 65-66 of the TRIPs Agreement. *Lehman*, Intellectual Property under the Clinton Administration, 27 George Washington Journal of International Law and Economics 204, 409 s. (1993-1994), *Pechman*, Seeking Multilateral Protection for Intellectual Property: The United States "TRIPs" over Special 301, 7 Minnesota Journal of Global Trade 179, 191, *Gupta*, The Uruguay Round of Multilateral Negotiations of GATT, in: *Gupta* (ed.), GATT Accord and India, New Delhi 1995, 113, 121.

182 World Intellectual Property Report 01/06, 14, 15.

183 Art. 65(5) of the TRIPs Agreement. Government agencies like the USPTO, the EPO, the WIPO and the WTO provide the technical assistance for the implementation of the TRIPs Agreement. This involves review of and drafting assistance on laws concerning intellectual property rights and their enforcement. Training programs usually cover the substantive provisions of the TRIPs Agreement, Office of the U.S Trade Representative (USTR), 2003 Special 301 Report, 4, available at www.ustr.gov/reports/2003/special301.htm.

There is only one provision in the TRIPs Agreement mentioning food in the sense of nutrition. Art. 8 of the TRIPs Agreement states that WTO Members may introduce measures necessary to protect public health and nutrition. Furthermore, the public interest in sectors of vital importance to their socio-economic and technological development can be promoted. These measures are only allowable if they are in conformity with the TRIPs Agreement.

III. Consequences

Straus[184] thinks of the TRIPs Agreement as a revolution in patent law and states:

> "The TRIPs Agreement constitutes an immensely important milestone in patent law (...) reducing the deficits in protection that were inherent in the Paris Convention for over 100 years (...)."

The TRIPs Agreement led to a more rational understanding of the patent system.[185] Food was not in the focus of the negotiations for the TRIPs Agreement, as it was disucssed only in context with pharmaceuticals and agrochemicals, but not on its own. In contrast, pharmaceuticals were widely debated in the ministerial conferences of the WTO. Its Members' governments agreed on August 30, 2003, on legal changes facilitating the import of cheaper drugs into developing countries under compulsory licensing if these countries cannot manufacture the medicines themselves.[186] There have been no such initiatives for food-related inventions. The patentability of food has not yet been particularly discussed at any of the Ministerial Conferences.

184 *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, 214.

185 Rott, Patentrecht und Sozialpolitik unter dem TRIPS-Abkommen, Baden-Baden 2002, 336.

186 WTO, Decision Removes Final patent Obstacle to Cheap Drug Imports, press release 350/Rev.1 of August 30, 2003.