

Abstract

Steven Ruby is a third-year law student at the University of Oklahoma College of Law. Mr. Ruby wrote this eBrief for the Project on Intellectual Property Rights in Living Matter under the direction of Professor Drew Kershen. Below, Mr. Ruby discusses the Food and Agriculture Organization of the United Nations (FAO) and its International Treaty on Plant Genetic Resources for Food and Agriculture as well as other agreements including the Trade Related Aspects of the Intellectual Property Systems (TRIPS) agreement and the International Convention for the Protection of New Varieties of Plants (UPOV) agreement. Each of these agreements strikes a unique balance between the competing interests of breeders and farmers.

Edited by Matthew B. Sellers

**THE INTERNATIONAL TREATY ON PLANT GENETIC RESOURCES FOR FOOD
AND AGRICULTURE: FRIEND OF THE INTERNATIONAL FARMER**

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I. Introduction

The world's population is growing at an extremely rapid pace, and in order to keep up with the nutritional needs of the population "[p]lant genetic resources for food and agriculture [PGRFA] are crucial"¹ for feeding the world's population. PGRFA include "the raw material that farmers and plant breeder's use to improve the quality and productivity of our crops."² In relation to those raw materials, "[t]he world is confronted with an astounding loss of agro biodiversity."³

"This loss creates serious vulnerabilities that could jeopardize global food security."⁴

The ability of "present and future generations to face unpredictable environmental changes and

¹ Commission on Genetic Resources for Food and Agriculture, *The International Treaty on Plant Genetic Resources for Food and Agriculture*, at <http://www.fao.org/ag/cgrfa/itpgr.htm> (last visited Apr. 14, 2004).

² *Id.*

³ United Nations Conference on Trade and Development, *New Treaty Preserves Global Food Security and Strengthens Farmers' Rights: UNCTAD Meeting Discusses Implications*, http://r0.unctad.org/trade_env/test1/meetings/plants/pressrelease2itpgrfa.doc (last visited Apr. 14, 2004) [hereinafter UNCTAD Meeting]. "For the world's 20 major food staple crops, 90% of the agro-biodiversity has been lost since the beginning of the 20th century. This loss creates serious vulnerabilities that could jeopardize global food security." *Id.*

⁴ *Id.*

human needs” has been reduced by this “loss of agro biodiversity.”⁵ According to Professor Jose Esquinas-Alcazar, Secretary of the FAO Commission on Plant Genetic Resources for Food and Agriculture, agro-biodiversity is different from other types of biodiversity because “no country on the planet is today self-sufficient with respect to the PGRFA they are using, and the average degree of interdependence among countries with regard to the most important crops is 70%.”⁶

The future of agriculture depends on international cooperation and on the open exchanging of the crops and their genes. The International Treaty on Plant Genetic Resources for Food and Agriculture “is vital to ensuring the continued availability of the plant genetic resources that countries will need to feed their people, [and] we must conserve for future generations the genetic diversity that is essential for food and agriculture.”⁷

II. The Food and Agriculture Organization of the United Nations

“FAO [Food and Agriculture Organization of the Nations⁸] acts as a neutral forum where all nations meet as equals to negotiate agreements and debate policy.”⁹ “[FAO] help[s] developing countries and countries in transition modernize and improve agriculture, forestry and fisheries practices and ensure good nutrition for all.”¹⁰ Founded in 1945, “FAO’s activities comprise four main areas: putting information within reach,¹¹ sharing policy expertise,¹²

⁵ Id.

⁶ Id. (quoting Jose Esquinas-Alcazar, Secretary of the FAO Commission on Plant Genetic Resources for Food and Agriculture)

⁷ Commission on Genetic Resources for Food and Agriculture, *supra* note 1.

⁸ FAO is governed by the Conference of Member Nations, which meets every two years to review the work carried out by the Organization and approve a Programme of Work and Budget for the next biennium. FAO is composed of eight departments: Administration and Finance, Agriculture, Economic and Social, Fisheries, Forestry, General Affairs and Information, Sustainable Development and Technical Cooperation.

Food and Agriculture Organization of the United Nations, Structure and Finance, at http://www.fao.org/UNFAO/about/finance_en.html (last visited Apr. 14, 2004).

⁹ Food and Agriculture Organization of the United Nations, About Us, at http://www.fao.org/UNFAO/about/index_en.html (last visited Apr. 14, 2004) [hereinafter About Us].

¹⁰ Id.

¹¹ FAO serves as a knowledge network. [They] use the expertise of [their] staff – agronomists, foresters, fisheries and livestock specialists, nutritionists, social scientists, economists, statisticians and other professionals to collect,

providing a meeting place for nations,¹³ and bringing knowledge to the field.”¹⁴ “FAO’s mandate is to raise levels of nutrition, improve agricultural productivity, better the lives of rural populations and contribute to the growth of the world economy.”¹⁵ In 2001, an FAO Conference “adopt[ed] the legally binding International Treaty on Plant Genetic Resources for Food and Agriculture¹⁶, which supports the work of breeders and farmers everywhere.”¹⁷

III. International Treaty on Plant Genetic Resources for Food and Agriculture

When the International Treaty on Plant and Genetic Resources for Food and Agriculture (PGRFA) was adopted by the 180-nation FAO conference on November 3, 2001, FAO Director-

analyze and disseminate data that aid development. A million times a month, someone visits the FAO Internet site to consult a technical document or read about our work with farmers. [They] also publish hundreds of newsletters, reports and books, distribute several magazines, create numerous CD-ROMS and host dozens of electronic fora. Food and Agriculture Organization of the United Nations, FAO’s Activities, at http://www.fao.org/UNFAO/about/activities_en.html (last visited Apr. 14, 2004).

¹² “FAO lends its years of experience to member countries in devising agricultural policy, supporting planning, drafting effective legislation and creating national strategies to achieve rural development and hunger alleviation goals.” Id.

¹³ On any given day, dozens of policy-makers and experts from around the globe convene at headquarters or in [their] field offices to forge agreements on major food and agriculture issues. As a neutral forum, FAO provides the setting where rich and poor nations can come together to build common understanding. Id.

¹⁴ [FAO’s] breadth of knowledge is put to the test in thousands of field projects throughout the world. FAO mobilizes and manages millions of dollars provided by industrialized countries, development banks and other sources to make sure the projects achieve their goals. FAO provides the technical know-how and in a few cases is a limited source of funds. In crisis situations, we work side-by-side with the World Food Programme and other humanitarian agencies to protect rural livelihoods and help people rebuild their lives. Id.; see also About Us, *supra* note 9.

¹⁵ Food and Agriculture Organization of the United Nations, FAO’s Mandate, at http://www.fao.org/UNFAO/about/mandate_en.html (last visited Apr. 14, 2004).

¹⁶ A Treaty on Plant Genetic Resources, Agriculture 21 (Dec. 2001), <http://www.fao.org/ag/magazine/0112sp3.htm>. In accordance with article 28, the Treaty shall enter into force on the ninetieth day after the deposit of the fortieth instrument of ratification, acceptance, approval or accession, provided that at least twenty instruments of ratification, acceptance, approval or accession have been deposited by Members of FAO. On 31 Mar. 2004, 13 instruments (including the European Community) were deposited with the Director-General of FAO. Having reached the required number of instruments in order for the Treaty to enter into force (40), the date of entry into force is 29 June 2004.

Food and Agriculture Organization of the United Nations, International Treaty on Plant Genetic Resources for Food and Agriculture, at <http://www.fao.org/Legal/treaties/033s-e.htm> (last visited Apr. 14, 2004). For a full status report on the instruments that have been deposited, see id.

¹⁷ Food and Agriculture Organization of the United Nations, A Short History of FAO, at http://www.fao.org/UNFAO/about/history_en.html (last visited Apr. 14, 2004).

General Jacques Diouf called it a “milestone”¹⁸ as this treaty “represents global agreement on a critical issue: management of the world’s agricultural biodiversity.”¹⁹ “The treaty is historic because it represents a legally-binding, international commitment to the improvement of the world’s key food and feed crops.”²⁰

The treaty’s objectives, as stated in Article 1, are “the conservation and sustainable use of plant genetic resources for food and agriculture and the fair and equitable sharing of benefits derived from their use, in harmony with the Convention on Biological Diversity, for sustainable agriculture and food security.”²¹ And to make sure these objectives are met the Treaty is linked to the “Food and Agriculture Organization of the United Nations and to the Convention on Biological Diversity.”²²

A. Plant Genetic Resources for Food and Agriculture

As defined in the treaty itself, plant genetic resources for food and agriculture are “any genetic material²³ of plant origin of actual or potential value for food and agriculture.”²⁴ An understanding of exactly what plant genetic resources for food and agriculture means is important, simply because the Scope of the Treaty “relates to plant genetic resources for food and agriculture.”²⁵

¹⁸ *A Treaty on Plant Genetic Resources*, *supra* note 16.

¹⁹ *Id.*

²⁰ *Id.* (quoting Clive Stannard, of FAO’s Commission on Plant Genetic Resources, who closely followed the Treaty negotiations).

²¹ International Treaty on Plant Genetic Resources for Food and Agriculture, Nov. 3, 2001, pt. I, art. 1.1, <http://www.fao.org/Legal/treaties/033t-e.htm> [hereinafter ITPGR].

²² *Id.* pt. I, art. 1.2.

²³ “Genetic Material means any material of plant origin, including reproductive and vegetative propagating material, containing functional units of heredity.” *Id.* pt. I, art. 2.

²⁴ *Id.* pt. I, art. 2.

²⁵ *Id.* pt. I, art. 3.

B. Multilateral System for Access and Benefit-Sharing

According to Professor Esquinas, a bilateral arrangement for access to PGRFA are inappropriate, therefore a multilateral solution “must be used to ensure the conservation and further development of PGRFA.”²⁶ Mr. Gert Keijer, Vice-Chairman of the FAO Commission explained that “PGRFA covered by the Treaty are pooled together for access by all, [and] [t]hose who access this treasure trove of material and obtain commercial benefits from the development of new varieties pay into a multilateral fund; this is mandatory when intellectual property rights are claimed on the developed variety which would restrict access to it.”²⁷ Funds collected, through the use of the multilateral system, “will be used to help finance developing country activities to preserve global agro biodiversity and support small farmers, according to the priorities outlined in the FAO Global Plan of Action, adopted in Leipzig in 1996.”²⁸

Part IV of the Treaty explains the Multilateral System for Access and Benefit-Sharing²⁹ through which “the Contracting Parties agree to establish a multilateral system, which is efficient, effective, and transparent, both to facilitate access to plant genetic resources for food and agriculture, and to share, in a fair and equitable way, the benefits arising from the utilization of these resources, on a complementary and mutually reinforcing basis.”³⁰ Applying the multilateral system to over sixty-four major crops and forages,³¹ “the Governing Body of the Treaty, which will be composed of the countries that have ratified it, will set out the conditions

²⁶ See UNCTAD Meeting, *supra* note 3.

²⁷ *Id.*

²⁸ *Id.*

²⁹ With the creation of this new multilateral system of access and benefit sharing, the Contracting Parties still “recognize the sovereign rights of States over their own plant genetic resources for food and agriculture, including that the authority to determine access to those resources rests with national governments and is subject to national legislation.” ITPGR, *supra* note 21, pt. IV, art. 10.1.

³⁰ *Id.* pt. IV, art. 10.2.

³¹ In following the statutory language of the Treaty, “the Multilateral System shall cover the plant genetic resources for food and agriculture listed in Annex I, established according to criteria of food security and interdependence.” *Id.* pt. IV, art. 11.1.

for access and benefit-sharing in the ‘Material Transfer Agreement.’”³² As the contracting parties recognize in the preamble of the Treaty, the implementation of a multilateral system could be beneficial while allowing states to still exercise “their sovereign rights over their plant genetic resources for food and agriculture.”³³

Through the use of the Multilateral System, resources may also be obtained “for utilization and conservation in research, breeding and training.”³⁴ Under the Treaty, there are two distinct circumstances involving payment. “If a commercial product is developed using these resources, the Treaty provides for payment of an equitable share of the resulting monetary benefits,” but “[i]f others may use it, payment is voluntary.”³⁵

C. Benefit-Sharing

“The Treaty provides for sharing the benefits of using plant genetic resources for food and agriculture.”³⁶ Part IV, Article 13 explains the “Benefit-sharing in the Multilateral System” in stating that “[t]he Contracting Parties agree that benefits arising from the use, including commercial, of plant genetic resources for food and agriculture under the Multilateral System shall be shared fairly and equitably through the following mechanisms: the exchange of information,³⁷ access to and transfer of technology,³⁸ capacity-building,³⁹ and the sharing of the

³² Commission on Genetic Resources for Food and Agriculture, *supra* note 1.

³³ ITPGR, *supra* note 21, pmb1.

Recognizing that, in the exercise of their sovereign rights over their plant genetic resources for food and agriculture, states may mutually benefit from the creation of an effective multilateral system for facilitated access to a negotiated selection of these resources and for the fair and equitable sharing of the benefits arising from their use.

Id.

³⁴ Commission on Genetic Resources for Food and Agriculture, *supra* note 1.

³⁵ *Id.*

³⁶ *Id.*

³⁷ See ITPGR, *supra* note 21, pt. IV, art. 13.2(a).

³⁸ *Id.* pt. IV, art. 13.2(b).

³⁹ *Id.* pt. IV, art. 13.2(c).

benefits arising from the commercialization⁴⁰ taking into account the priority activity areas in the rolling Global Plan of Action, under the guidance of the Governing Body.”⁴¹ Article 13.3 also “foresees a funding strategy to mobilize funds for activities, plans and programmes that help, above all, small farmers⁴² in developing countries,” and includes “a share of the monetary benefits paid under the Multilateral System.”⁴³

D. Protection of Farmer’s Rights

Part III, Article 9.1 of the Treaty explains that “[t]he Contracting Parties recognize the enormous contribution that the local and indigenous communities and farmers of all regions of the world...have made and will continue to make for the conservation and development of plant genetic resources which constitute the basis of food and agriculture production throughout the world.”⁴⁴ Within that particular clause is “the basis for Farmers’ Rights, which include the protection of traditional knowledge,⁴⁵ and the right to participate equitably in benefit-sharing,⁴⁶ and in national decision-making about plant genetic resources,⁴⁷” and “gives governments the responsibility for implementing these rights.”⁴⁸ Article 9.3 states that “nothing in this Article

⁴⁰ *Id.* pt. IV, art. 13.2(d).

⁴¹ *Id.* pt. IV, art. 13.2.

⁴² The Contracting Parties agree that benefits arising from the use of plant genetic resources for food and agriculture that are shared under the Multilateral System should flow primarily, directly and indirectly, to farmers in all countries, especially in developing countries, and countries with economies in transition, who conserve and sustainably utilize plant genetic resources for food and agriculture.

Id. pt. IV, art. 13.3.

⁴³ Commission on Genetic Resources for Food and Agriculture, *supra* note 1.

⁴⁴ ITPGR, *supra* note 21, pt. III, art. 9.1.

⁴⁵ “Protection of traditional knowledge relevant to plant genetic resources for food and agriculture.” *Id.* pt. III, art. 9.2(a).

⁴⁶ “[T]he right to equitably participate in sharing benefits arising from the utilization of plant genetic resources for food and agriculture.” *Id.* pt. III, art. 9.2(b).

⁴⁷ “[T]he right to participate in making decisions, at the national level, on matters related to the conservation and sustainable use of plant genetic resources for food and agriculture.” *Id.* pt. III, art. 9.2(c).

⁴⁸ Commission on Genetic Resources for Food and Agriculture, *supra* note 1.

shall be interpreted to limit any rights that farmers have to save, use, exchange and sell farm-saved seed/propagating material, subject to national law and as appropriate.”⁴⁹

IV. The Importance of Farmer’s Rights in Relation to Other International Agreements

The importance of the protection of *farmers’ rights* has been evidenced by the concern of, especially developing, countries around the world with respect to how recent legislation has addressed the issue. It is thought that “[t]he enshrinement of Farmers’ Rights in this Treaty could boost developing country efforts in other forums to protect their farmers and interests.”⁵⁰ It seems as if the more developed countries have begun to pressure developing countries “to adopt plant variety protection legislation” which pushes breeders’ rights but weakens farmers’ rights.⁵¹ Two particular pieces of international legislation have come to the forefront of this discussion. The first is Article 27.3(b) of the Trade Related Aspects of the Intellectual Property Systems (TRIPS)⁵² agreement, and the second is the latest amendments made to the International Convention for the Protection of New Varieties of Plants (UPOV) agreement.

A. TRIPS Article 27.3(b)

TRIPS Article 27.3(b) pertains to Patentable subject matter and states that “Members may also exclude from patentability:

(b) plants and animals other than micro-organisms, and essentially biological processes for the production of plants or animals other than non-biological and microbiological processes. However, Members shall provide for the protection of plant varieties either by patents or by an effective *sui generis* system or by a combination thereof.”⁵³

⁴⁹ ITPGR, *supra* note 21, pt. III, art. 9.3.

⁵⁰ UNCTAD Meeting, *supra* note 3.

⁵¹ *Id.*

⁵² Agreement on Trade-Related Aspects of Intellectual Property Rights, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, Legal Instruments--Results of the Uruguay Round vol. 31, art. 27(1), 33 I.L.M. 81 (1994), at http://www.wto.org/english/tratop_e/trips_e/t_agm3c_e.htm#5 (last visited Sept. 17, 2004).

⁵³ *Id.* § 5, art. 27.3(b).

This particular provision “requires WTO members to protect new plant varieties via patents.”⁵⁴

The application of the above mentioned provision can cause some problems for many developing countries who are “currently seeking ways to meet their obligations under TRIPS Article 27.3(b) to provide effective protection for new plant varieties while at the same time protecting Farmers’ Rights and taking into account the important contribution that farmers have made to the conservation and development of plant genetic resources.”⁵⁵ Professor Carlos Correa of the University of Buenos Aires states that for the above mentioned reasons “[t]here is a need to strike a balance between breeders’ and Farmers’ Rights.”⁵⁶

B. International Convention for the Protection of New Varieties of Plants

The 1991 UPOV explicitly states that “[e]ach Contracting Party⁵⁷ shall grant and protect breeders’ rights.”⁵⁸ This emphasis on the protection of breeders’ rights led to certain countries expressing concern that under this most recent version of the International Convention for the Protection of New Varieties of Plants, farmers’ rights have been neglected.⁵⁹ “Farmers could no longer informally sell seeds saved from their harvest of protected varieties or even to exchange them on a non-commercial basis...[which] could seriously undermine the livelihood of rural agricultural communities and put a brake on their further development of agro-biodiversity.”⁶⁰

⁵⁴ See UNCTAD Meeting, *supra* note 3.

⁵⁵ *Id.*

⁵⁶ *Id.*

⁵⁷ “Contracting Party” means a State or an intergovernmental organization party to this Convention. International Convention for the Protection of New Varieties of Plants, Dec. 2, 1961, ch. I, art. 1(vii), 33 U.S.T. 2703, 815 U.N.T.S. 89, as Revised at Geneva on Nov. 10, 1972, on Oct. 23, 1978, and on Mar. 19, 1991, *available at* <http://www.upov.int/en/publications/conventions/1991/pdf/act1991.pdf> (last visited Sept. 17, 2004) [hereinafter 1991 Convention].

⁵⁸ *Id.* ch. II, art. 2.

⁵⁹ See UNCTAD Meeting, *supra* note 3.

⁶⁰ *Id.*

The general feeling of countries that are concerned about the neglecting of farmers' rights is that "an 'effective' *sui generis* system for protecting new plant varieties must provide incentives to both the developer of new varieties using modern breeding techniques, but also incentives and rewards to the farmers – the developers and providers of the landraces, which are the raw material for the new varieties." It is the feeling of Professor Equinas that "[i]f a system is to be effective and sustainable in the long run, it must include both sides of the equation."⁶¹

The recent meetings to review relevant provisions of TRIPS, undertaken by the Commission on Intellectual Property Rights (financed by the U.K. Government), have come to a similar consensus. The report suggests that TRIPS "should permit countries to develop *sui generis* regimes for the protection of plant varieties that suit their agricultural systems, [and] [s]uch regimes should permit access to the protected varieties for further research and breeding, and provide for the right of farmers to save and plant-back seed, including the possibility of informal sale or exchange."⁶²

V. Beneficiaries of the Treaty

There are so many parties that benefit from the Treaty the following is a short list of a few:

- Farmers and their communities, through Farmers' Rights;
- Consumers, because of a greater variety of foods, and of agriculture products, as well as increased food security;
- The scientific community, through access to the plant genetic resources crucial for research and plant breeding;
- International Agricultural Research Centres, whose collections the Treaty puts on a safe and long-term legal footing;
- Both the Public and private sectors, which are assured access to a wide range of genetic diversity for agricultural development; and

⁶¹ *Id.*

⁶² *Id.*

- The environment, and future generations, because the Treaty will help conserve the genetic diversity necessary to face unpredictable environmental changes, and future human needs.⁶³

VI. Conclusion

It will be necessary for farmers' rights to remain as a central consideration in any future legislation regarding intellectual property rights that involve biotechnology. Farmers' rights are often at odds with breeders' rights and the International Treaty on Plant Genetic Resources for Food and Agriculture is a good reminder of the need for balance between their competing interests. For any of the above mentioned treaties (TRIPS, UPOV, or PGRFA) to be successful, there must be cooperation between all countries involved. Without the balance between breeders' and farmers' rights, a divide will emerge between developed and developing countries that could frustrate the purpose of all of the above-mentioned treaties.

⁶³ Commission on Genetic Resources for Food and Agriculture, *supra* note 1.