

## Genesis and Importance of Plant Variety Protection in Seed Industry Development

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The World Trade Organization's predecessor, the General Agreement on Trade and Tariff (GATT), was established on a provisional basis after the Second World War similar to other new multilateral institutions dedicated to international economic cooperation - notably the "Breton Woods" institutions now known as the World Bank and the International Monetary Fund. The original 23 GATT countries were among over 50 which agreed a draft Charter for an International Trade Organization (ITO) - a new specialized agency of the United Nations. The Charter was intended to provide not only world trade disciplines but also contained rules relating to employment, commodity agreements, restrictive business practices, international investment and services.

In an effort to give boost to trade liberalization after the Second World War and to correct the protectionist measures which remained in place from the early 1930s - tariff negotiations were opened among the 23 founding GATT "contracting parties" in 1946. The tariff concessions and rules together became known as the General Agreement on Tariffs and Trade and entered into force in January 1948. Although the ITO Charter was finally agreed at a UN Conference on Trade and Employment in Havana in March 1948, ratification in national legislatures proved impossible in some cases and the ITO was effectively dead. Despite its provisional nature, the GATT remained the only multilateral instrument governing international trade from 1948 until the establishment of the WTO. Although, in its 47 years, the basic legal text of the GATT remained much as it was in 1948, there were additions in the form of "plurilateral" voluntary membership, agreements and continual efforts to reduce tariffs. Much of this was achieved through a series of "trade rounds".

### Trade Rounds

The biggest leaps forward in international trade liberalization have come through multilateral trade negotiations, or "trade rounds", under the auspices of GATT - the Uruguay Round was the latest and most extensive. Although often lengthy, trade rounds offer a package approach to trade negotiations; an approach with a number of advantages over issue-by-issue negotiations.

GATT and WTO Trade Rounds					
Name	Start	Duration	Countries	Subjects covered	Achievements
Geneva	April 1946	7 months	23	Tariffs	Signing of GATT, 45,000 tariff concessions affecting \$10 billion of trade
Currency	April 1949	5 months	13	Tariffs	Countries exchanged some 5,000 tariff concessions
Turkey	Sept., 1950	8 months	38	Tariffs	Countries exchanged some 8,700 tariff concessions, cutting the 1948

					tariff levels by 25%
<b>Geneva II</b>	Jan., 1956	5 months	26	Tariffs, admission of Japan	\$2.5 billion in tariff reductions
<b>Dillon</b>	Sep., 1960	11 months	26	Tariffs	Tariff concessions worth \$4.9 billion of world trade
<b>Kennedy</b>	May 1964	37 months	62	Tariffs, Anti-dumping	Tariff concessions worth \$40 billion of world trade
<b>Tokyo</b>	Sep., 1973	74 months	102	Tariffs, non-tariff measures, "framework" agreements	Tariff reductions worth more than \$300 billion dollars achieved
<b>Uruguay</b>	September 1986	87 months	123	Intellectual property, dispute settlement, agriculture, creation of WTO, etc	The round led to the creation of WTO, and extended the range of trade negotiations, leading to major reductions in tariffs (about 40%) and agricultural subsidies and an extension of intellectual property rights.
<b>Doha</b>	November 2001	Not yet concluded	141	Agriculture, competition, transparency, patents etc	The round is not yet concluded.

Most of GATT's early trade rounds were devoted to continuing the process of reducing tariffs. The results of the Kennedy Round in the mid-sixties, however, included a new GATT Anti-Dumping Agreement. The Tokyo Round during the seventies was a more sweeping attempt to extend and improve the system.

### Basic Principles of GATT

The principal mechanism for progress on trade liberalization within the GATT has been periodic multilateral negotiating rounds. In all, there have been eight such rounds, starting with the Geneva Round of 1947 that established the GATT, and concluding with the Uruguay Round that ended in December 1993 and established the WTO. Four important key principles of GATT are

**Most Favored Nation (MFN) Treatment:** It is the fundamental principle of the GATT. Each contracting party to the GATT is required to provide to all other contracting parties the same conditions of trade as the most favorable terms it extends to any one of them.

**Reciprocity:** GATT advocates the principle of "rights" and "obligations". Each contracting party has a right, e.g. access to markets of other trading partners on a MFN basis, but also an obligation to reciprocate with trade concessions on a MFN basis.

**Transparency:** Fundamental to a transparent system of trade is the need to harmonize the system of import protection, so that barriers to trade can then be reduced through the process of negotiations.

The GATT therefore limited the use of quotas, except in some specific sectors as agriculture, and advocated import regimes that are based on a "tariff-only" regime.

### **Tariff binding and reduction**

When GATT was established, tariffs were the main form of trade protection, and negotiations in the early years focused primarily upon tariff binding and reduction.

### **Treatment of Agriculture under GATT**

The differences between the approach to agriculture and the approach to trade in manufactures in the GATT are fundamental in understanding the special role of agriculture in the GATT. The United States (US), the main agricultural exporter at the time the GATT was introduced, had its Agricultural Adjustment Act of 1933 fully operational by 1947. This Act permitted authorities to resort to tariffs and quantitative import controls and export subsidies where required in order to stabilize domestic producer prices. The European Community (EC) did not exist then and its Common Agricultural Policy (CAP) did not come into full force until the early 1960s. A majority of other countries that have become major traders now were either recovering from war or were newly independent.

Domestic political and social pressures were also important factors behind some contracting parties seeking exemptions for agriculture. In richer countries, agriculture was in decline as industry expanded rapidly. The resulting difficulties in maintaining farm incomes and populations emerged as a politically sensitive issue. Agriculture was seen as a unique sector of the economy that, for various reasons including national food security, could not be treated like other sectors.

Under this environment, not only agriculture received "Special Treatment" in the GATT, but this treatment appeared to have tailored to the US farm programmes then in existence. There are some - but not many - places where exceptions were made for agriculture from the GATT rules. But that was enough to keep agriculture out of the general rules. The two places where the contrast is most striking are on subsidies and quantitative restrictions.

### **World Agricultural Markets in 1970s and 1980s**

- The high level of domestic support to producers - about 60 percent of the value of production in OECD countries in 1986-88 - paid by taxpayers and consumers as a result of both domestic support and border protection led to increasing amounts of surplus production which could be disposed off in world markets only with export subsidies.
- Where domestic prices were not linked to world prices, the responses to changing international prices in both supply and demand that might have helped to dampen world price fluctuations were absent. As a result, world market prices became more unstable.
- The large scale use of export subsidies, mainly by the US and the EC, in order to dispose of their surpluses tended to depress world market prices and make them more unstable, as subsidies were essentially political decisions and were unpredictable. This practice generated negative effects for rest of the world producers and exporters of these goods. Indeed, during the second half of 1980s, there was a "subsidies war" between the two major exporters as they fought to maintain their share in world markets.
- For non-subsidizing countries (including most developing countries), agricultural protectionism also imposed implicit taxes on farmers. Artificially low world prices created a downward pressure on domestic prices. The resulting price disincentives often compromised agricultural production, threatened the livelihoods of large sectors of the population mainly living on agriculture, and made many developing countries increasingly dependent upon cheap food imports.

- Countries with a comparative advantage in the production and export of tradable agricultural commodities were also unable to produce and export as much as they would have under a more liberal trading regime, and have been deprived of substantial export revenues.
- International tension and disputes over agricultural trade arose with increasing frequency. The GATT institutions were often used in an attempt to resolve these disputes, but not with much success as rules were made ineffective due to the various exemptions. In fact, 60 percent of all trade disputes submitted to the GATT dispute settlement process between 1980 and 1990 were concerned with agriculture.

### **Uruguay Round - Agricultural Negotiations**

The Uruguay Round was launched in 1986 by the Punta del Este Ministerial Declaration. An important element of it was an explicit recognition of the effects that domestic agricultural policies have on trade. It was agreed that the round would concentrate not only on the issue of border protection and export subsidies, but also on a broad range of domestic agricultural policy issues.

#### **Major Actors and Interests in Agricultural Negotiations**

- The US was enthusiastic about promoting greater liberalization in agricultural trade, and was keen to reduce the protection and support granted to EC producers under the CAP.
- The EC was much less amenable to far reaching liberalization. The EC had a strong opposition to across-the-board reforms, and wanted instead to negotiate concessions on a commodity by commodity basis.
- The Cairns Group of countries as net exporters of agricultural commodities generally shared a common interest on greater liberalization in farm trade; it argued strongly for a reduction in protectionism and support measures in developed countries.
- A group of net food-importing developing countries were concerned with the possible negative effects of the reform process on their food import bills. Because of their efforts, the UR included a Ministerial *Decision* in their (including least-developed countries) favor that addressed some response mechanisms to possible negative effects.
- The rest of the developing countries, as well as well the Cairns group, were hopeful of greater access to import markets in developed countries and so supported market access reforms.
- **General Principles Governing the Agricultural Negotiations**
- Improving market access through, inter alia, the reduction of import barriers.
- Improving the competitive environment by increasing regulation on the use of all direct and indirect subsidies and other measures affecting directly or indirectly agricultural trade.
- Minimizing the adverse effects that sanitary and phyto-sanitary regulations and barriers can have on trade in agriculture.

### **Mid-term Review**

After the launch of Uruguay Round in 1986, the mid-term review was organized in Montreal at the end of 1988. Already two years into the negotiations, the parties in the agricultural group were as far apart as ever and failed to produce an interim text for discussion there. Meanwhile, the Cairns Group refused to approve the draft texts of any of the other fourteen negotiating groups (in other areas) until there was a text on agriculture.

A breakthrough came with the resumption of the mid-term review in April 1989. This culminated in the Geneva Accord that saw the US negotiators drop their demand for a zero-for-zero option and led to the adoption of a series of short-term measures that involved a freeze in

current levels of domestic support, export subsidies and border protection. The negotiating parties proposed that negotiations should proceed by seeking separate commitments in each of these three policy areas.

The EC and some other countries were reluctant, however, to adopt such an approach. The EC was particularly opposed to making substantial cuts on its export subsidies. Talks continued in the hope that an agreement could be achieved by December 1990, the original deadline for the conclusion of the UR. However, the text prepared then was rejected by the EC and the deadline passed without any agreement. It was not until 1991 that the negotiators finally arrived at a consensus, whereby countries would agree to make concessions in each of the above three areas. Having agreed on this principle, the next step was to establish the level of specific concessions, which took two more years of tough negotiating.

### **DunkelDraft**

In December 1991, the then director-general of the GATT presented a comprehensive Draft Final Act, also known as the Dunkel Draft, in the hope of bringing the round closer to a conclusion. The Draft covered agriculture, as well as other areas under negotiations. It included the first complete text on agriculture, in which quantitative proposals were presented with respect to concessions in each of the three major areas of agriculture. But three days later, the EC rejected the draft saying that parts of it would have to be re-negotiated. In the meantime, the adoption by the EC of the reform of the CAP in May 1992 was a major development that facilitated the negotiations. This reform brought EC's agricultural policy much closer to meeting the targets outlined in the Dunkel proposals. Its most important element in the context of the ongoing negotiations was to substitute a certain amount of domestic price support with direct payments to agricultural producers.

However, two issues continued to linger in the negotiations. The EC was still reluctant to make substantial cuts in export subsidies, and a question hung over whether the direct payments under the new CAP should be subject to domestic support reduction commitments.

### **Blair House Accord**

The US and EC negotiators undertook a series of bilateral discussions, that eventually led to an agreement known as the Blair House Accord. These meetings focused on making suitable amendments to the Dunkel Draft. These amendments, which are now in the Final Act, included

- permitted volume of subsidized exports was reduced to 21 percent from the original proposal of 24 percent;
- base period used for establishing the baseline from which export subsidies would be cut was made more flexible;
- direct income payments made under production limiting programmes such as EC's scheme under the reformed CAP and the US's deficiency payments were made exempt from domestic support reduction commitments; and
- Commitments to reduce domestic support on a product-by-product basis were replaced by a commitment to reduce overall support to the agricultural sector.

Thus, the Blair House Accord broke the impasse in the agricultural negotiating group and the UR was finally concluded in December 1993. With the Agreement on Agriculture in the *Final Act Embodying the Results of the Uruguay Round Multilateral Trade Negotiations*, agricultural trade came much closer to the GATT disciplines after 46 years - a long time indeed. And this is only "much closer", not fully in, because the Agreement still permits the use of domestic and export subsidies.

## World Trade Organization (WTO)

The World Trade Organization (WTO) is officially commenced on January 1, 1995 under the Marrakech Agreement, replacing the General Agreement on Tariffs and Trade (GATT), which commenced in 1948. Most of the issues that the WTO focuses on derive from previous trade negotiations, especially from the Uruguay Round (1986–1994).

<b>Formation</b>	January 1, 1995
<b>Headquarters</b>	Geneva, Switzerland
<b>Membership</b>	164 members (since 29 July, 2016)
<b>Official languages</b>	English, French, Spanish
<b>Director-General</b>	Roberto Azevedo
<b>Publications</b>	World Trade Report & International Trade Statistics

## Functions

- Regulation of trade between participating countries.
- Provides a framework for negotiating and formalizing trade agreements.
- Dispute resolution process aimed at enforcing participants' adherence to WTO agreements, which are signed by representatives of member governments and ratified by their parliaments.
- **How is the WTO different from GATT?**
- The World Trade Organization is not a simple extension of GATT; on the contrary, it completely replaces its predecessor and has a very different character. Among all, the principal differences are
- The GATT was a set of rules, a multilateral agreement, with no institutional foundation, only a small associated secretariat, which had its origins in the attempt to establish an International Trade Organization in the 1940s. The WTO is a permanent institution with its own secretariat.
- The GATT was applied on a "provisional basis" even if, after more than forty years, governments chose to treat it as a permanent commitment. The WTO commitments are full and permanent.
- The GATT rules applied to trade in merchandise goods. In addition to goods, the WTO covers trade in services and trade-related aspects of intellectual property.
- While GATT was a multilateral instrument, by the 1980s many new agreements had been added of a plurilateral, and therefore selective, nature. The agreements, which constitute the WTO, are almost all multilateral and, thus, involve commitments for the entire membership.
- The WTO dispute settlement system is faster, more automatic, and thus much less susceptible to blockages, than the old GATT system.

## WTO & Doha Development Round

The organization is attempting to complete negotiations on the Doha Development Round, which was launched in 2001 with an explicit focus on addressing the needs of developing countries. As of June 2012, the future of the Doha Round remains uncertain: the work programme lists 21 subjects in which the original deadline of 1 January 2005 was missed, and the round is still incomplete. The conflict between free trade on industrial goods and services but retention of protectionism on farm subsidies to domestic agricultural sector (requested by developed countries) and the substantiation of the international liberalization of fair trade on agricultural products (requested by developing countries) remain the major obstacles. These points of contention have

hindered any progress to launch new WTO negotiations beyond the Doha Development Round. As a result of this impasse, there has been an increasing number of bilateral free trade agreements signed.

### **Agreement on Trade Related Intellectual Property Rights (TRIPS)**

The Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS) is an international agreement administered by the World Trade Organization (WTO) that sets down minimum standards for many forms of intellectual property (IP) regulation as applied to nationals of other WTO Members. It was negotiated at the end of the Uruguay Round of the General Agreement on Tariffs and Trade (GATT) in 1994.

The TRIPS agreement introduced intellectual property law into the international trading system for the first time and remains the most comprehensive international agreement on intellectual property to date. In 2001, developing countries, concerned that developed countries were insisting on an overly narrow reading of TRIPS, initiated a round of talks that resulted in the Doha Declaration.

Although the UPOV Acts have provided IPR protection for plant varieties for more than forty years, their significance has recently been overshadowed by a different intellectual property treaty, the Agreement on Trade-Related Aspects of Intellectual Property Rights ("TRIPs" or the "TRIPs Agreement"). Adopted in 1994 as a treaty administered by the WTO, TRIPs is the first and only IPR treaty that seeks to establish universal, minimum standards of protection across the major fields of intellectual property, including patents, copyrights, trademarks, industrial designs, integrated circuits and trade secrets. Although the TRIPs Agreement devotes only minimal attention to plant breeders' rights or plant variety protection and does not even mention the UPOV Acts, its adoption has done more to encourage the legal protection of plant varieties than any other international agreement.

### **Intellectual Property Rights (IPRs)**

Intellectual property rights (IPRs) are legal rights granted by governmental authorities to control certain products of human intellectual effort and ingenuity (or) any creative work (or) invention considered to be the property of its creator.

Types of intellectual property covered by the TRIPS Agreement

- Copyright and related rights
- Trademarks, including service marks
- Geographical indications
- Industrial designs
- Patents
- Layout-designs of integrated circuits
- Undisclosed information, including trade secrets

### **Goals of Granting IPR to Plant Varieties**

The policy goals of granting IPRs to plant varieties are grounded principally on an instrumentalist approach to IPRs. This is true both for patents and plant breeders' rights.

Under instrumentalist approach, new plant varieties are afforded legal protection to encourage commercial plant breeders to invest resources, labor and time needed to improve existing plant varieties by ensuring that breeders receive adequate remuneration when they market the propagating material of those improved varieties. In the absence of a grant of exclusive rights to breeders, the dangers of free riding by third parties would be considerable. This is because the

genetic material within plants that specifies their distinctive and commercially valuable features is naturally self-replicating, for example by reproduction of seeds or other propagating material. Self-replication makes innovations incorporating biological material particularly susceptible to exploitation by parties other than the innovator.

It provides an incentive for private research and development into new breeding techniques, thereby reducing the need for government funding to subsidize these activities. It encourages the development of new and beneficial plant varieties for use by farmers and consumers. And it furthers the society's development of agriculture, horticulture and forestry. An international system of IPR protection for plant varieties expands these benefits by facilitating access to new varieties created in other states. Once breeders are assured that their rights will be protected in other states, breeders will be more willing to make their new varieties available in those states (assuming they have access to a distribution and marketing infrastructure). This benefits farmers, consumers and researchers in many more jurisdictions.

### **Plant Variety Protection Required By TRIPS**

Article 27.3(b) contains the only textual provisions of the TRIPs Agreement relating to plant variety protection. The article states in relevant part:

*"Members may also exclude from patentability: (b) plants and animals other than microorganisms; 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 for plant varieties either by patents or by an effective sui generis system or by any combination thereof"*

First, TRIPS provisions on plant varieties do not refer to or incorporate any preexisting intellectual property agreements, including the 1978 and 1991 UPOV Acts. This omission contrasts sharply with other fields of intellectual property, such as patents, copyrights and trademarks, for which TRIPS expressly requires WTO Members to comply with the standards of protection contained in preexisting IPR agreements, such as the Berne Convention for the Protection of Literary and Artistic Works and the Paris Convention for the Protection of Industrial Property. As a result of this omission, WTO Members are neither required to become members of UPOV nor does to enact national law consistent with either UPOV Act in order to comply with their obligations under TRIPS. Although the drafting history of TRIPS does not explain this markedly different treatment of plant varieties, it seems likely that compliance with UPOV was not required because so few WTO Members were party to UPOV and those who were could not agree upon which of its two most recent Acts should serve as the standard for protection.

Second, article 27.3(b) permits WTO Members to protect plant varieties using one of three distinct approaches: (1) patent law, (2) an effective *sui generis* system or (3) a combination of elements from both systems. Thus, unlike most other areas of intellectual property protected by TRIPS, article 27.3(b) expressly grants Members significant discretion to choose the manner in which they will protect plant varieties and it contemplates that that discretion may be exercised differently by different states.

### **Core Requirements of an Effective Sui Generis System**

According to a 1997 report, there are four core elements that any national plant variety protection law must contain in order to qualify as an "effective *sui generis* system" within the meaning of TRIPS article 27.3(b)



- The law must apply to all plant varieties in all species and botanical genera.
- It must grant plant breeders an IPR, i.e. the exclusive right to control particular acts with respect to those protected varieties, or at a minimum, the right to remuneration when third parties engage in certain acts.
- It must provide national treatment and MFN treatment to breeders from other WTO members.
- It must contain procedures that enable breeders to enforce the rights granted to them under such a law.

### **International Union for the Protection of New Varieties of Plants (UPOV)**

The UPOV system of plant variety protection came into being with the adoption of the International Convention for the Protection of New Varieties of Plants by a Diplomatic Conference in Paris on December 2, 1961 and it was revised in 1972, 1978 and 1991. This was the point at which there was recognition of the rights of plant breeders on an international basis. The UPOV Convention provides a *sui generis* form of intellectual property protection which has been specifically adapted for the process of plant breeding and has been developed with the aim of encouraging breeders to develop new varieties of plants.

The mission of UPOV is to provide and promote an effective system of plant variety protection, with the aim of encouraging the development of new varieties of plants, for the benefit of society.

Most countries and intergovernmental organizations which have introduced a plant variety protection (PVP) system have chosen to base their system on the UPOV Convention in order to provide an effective, internationally recognized system. As of November 8, 2016, UPOV has 74 members. The UPOV Convention specifies the acts that require the breeder's authorization in respect of the propagating material of a protected variety and, under certain conditions, in respect of the harvested material.

Under the UPOV Convention, the breeder's right is only granted where the variety is (i) new (ii) distinct (iii) uniform (iv) stable and has a suitable denomination. The breeder's right does not extend to acts done (i) privately and for non-commercial purposes, (ii) for experimental purposes and (iii) for the purpose of breeding other varieties.

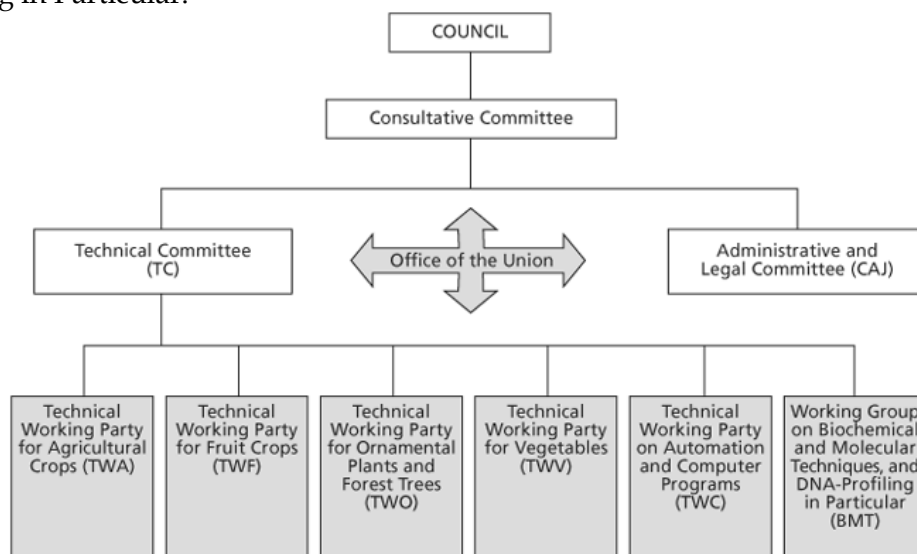
The introduction of the UPOV system of plant variety protection and UPOV membership were found to be associated with:

1. Increased breeding activities.
2. Greater availability of improved varieties.
3. Increased number of new varieties.
4. Diversification of types of breeders (e.g. private breeders, researchers).
5. Increased number of foreign new varieties.
6. Encouraging the development of a new industry competitiveness on foreign markets.
7. Improved access to foreign plant varieties and enhanced domestic breeding programs.

### **Organizational Structure**

The permanent organs of the Union are the Council and the Office of the Union. The Council has established a Consultative Committee, an Administrative and Legal Committee and a Technical Committee. In addition, it has established Technical Working Parties for: Agricultural Crops; Automation and Computer Programs; Fruit Crops; Ornamental Plants and Forest Trees; and

Vegetables and has introduced a Working Group on Biochemical and Molecular Techniques and DNA-Profiling in Particular.



Source: 'UPOV bodies' link on [www.upov.int/en/about/mission.html](http://www.upov.int/en/about/mission.html)

### Protection of Plant Varieties and Farmers Rights Act, 2001

In order to provide for the establishment of an effective system for the protection of plant varieties, the rights of farmers and plant breeders and to encourage the development of new varieties of plants it has been considered necessary to recognize and to protect the rights of the farmers in respect of their contributions made at any time in conserving, improving and making available plant genetic resources for the development of new plant varieties. The Govt. of India enacted “The Protection of Plant Varieties and Farmers’ Rights (PPV&FR) Act, 2001” adopting *sui generis* system. Indian legislation is not only in conformity with International Union for the Protection of New Varieties of Plants (UPOV), 1978, but also have sufficient provisions to protect the interests of public/private sector breeding institutions and the farmers. The legislation recognizes the contributions of both commercial plant breeders and farmers in plant breeding activity and also provides to implement TRIPs in a way that supports the specific socio-economic interests of all the stakeholders including private, public sectors and research institutions, as well as resource-constrained farmers. To implement the provisions of the Act, Department of Agriculture and Cooperation, Ministry of Agriculture established the Protection of Plant Varieties and Farmers’ Rights Authority on 11 November, 2005.

The Chairperson is the Chief Executive of the Authority. Besides the Chairperson, the Authority has 15 members, as notified by the Government of India (GOI). Eight of them are *ex-officio* members representing various Departments/ Ministries, three from SAUs and the State Governments, one representative each for farmers, tribal organization, seed industry and women organization associated with agricultural activities are nominated by the Central Government. The Registrar General is the *ex-officio* Member Secretary of the Authority.

### Objectives of PPV&FR Act, 2001

- ✓ To establish an effective system for the protection of plant varieties, the rights of farmers and plant breeders and to encourage the development of new varieties of plants.

- ✓ To recognize and protect the rights of farmers in respect of their contributions made at any time in conserving, improving and making available plant genetic resources for the development of new plant varieties.
- ✓ To accelerate agricultural development in the country, protect plant breeders' rights; stimulate investment for research and development both in public & private sector for the development of new plant varieties.
- ✓ Facilitate the growth of seed industry in the country which will ensure the availability of high quality seeds and planting material to the farmers.

### **General functions of the Authority**

- ✓ Registration of new plant varieties, essentially derived varieties (EDV) and extant varieties.
- ✓ Developing DUS (Distinctiveness, Uniformity and Stability) test guidelines for new plant species.
- ✓ Developing characterization and documentation of registered varieties.
- ✓ Compulsory cataloging facilities for all variety of plants.
- ✓ Documentation, indexing and cataloguing of farmers' varieties.
- ✓ Recognizing and rewarding farmers, community of farmers, particularly tribal and rural community engaged in conservation, improvement, preservation of plant genetic resources of economic plants and their wild relatives.
- ✓ Maintenance of the National Register of Plant Varieties.
- ✓ Maintenance of National Gene Bank.

### **Rights Provided under the Act**

#### **Breeders' rights**

Breeders will have exclusive rights to produce, sell, market, distribute, import or export the protected variety. Breeder can appoint agent/ licensee and may exercise for civil remedy in case of infringement of rights.

#### **Researchers' rights**

Researcher can use any of the registered variety under the Act for conducting experiment or research. This includes the use of a variety as an initial source of variety for the purpose of developing another variety but repeated use needs prior permission of the registered breeder.

#### **Farmers' rights**

- ✓ A farmer who has evolved or developed a new variety is entitled for registration and protection in like manner as a breeder of a variety;
- ✓ Farmers' variety can also be registered as an extant variety;
- ✓ A farmer can save, use, sow, re-sow, exchange, share or sell his farm produce including seed of a variety protected under the PPV&FR Act, 2001 in the same manner as he was entitled before the coming into force of this Act provided farmer shall not be entitled to sell branded seed of a variety protected under the PPV&FR Act, 2001;
- ✓ Farmers are eligible for recognition and rewards for the conservation of Plant Genetic Resources of land races and wild relatives of economic plants;
- ✓ There is also a provision for compensation to the farmers for non-performance of variety under Section 39 (2) of the Act, 2001.

- ✓ Farmer shall not be liable to pay any fee in any proceeding before the Authority or Registrar or the Tribunal or the High Court under the Act.

### **Plant Variety Journal of India**

Authority publishes its official journal "Plant Varieties Journal of India" (PVJI) as a monthly bilingual (Hindi & English) publication and it is made available to public on the first working day of each month on its official website. This journal has the equivalent status of a gazette under the Regulations, 2006. The contents of journal includes official and public notices, passport data of plant varieties, DUS test guidelines of crop species, details of certificate of registration and other related matters.

### **Certificate of registration**

Applications which have fulfilled all requirements and have been finally accepted by the Registrar for registration were issued Certificates of Registration. The certificate of registration issued will be valid for nine years in case of trees and vines and six years in case of other crops. It may be reviewed and renewed for the remaining period on payment of renewal fees subject to the condition that total period of validity shall not exceed eighteen years in case of trees and vines from the date registration of the variety, fifteen years from the date of notification of variety under the Seeds Act, 1966 and in other cases fifteen years from the date of registration of the variety. So far, the Authority has received 3320 applications on September, 2011 for registration for different categories of varieties including farmer's varieties.

### **National Register of Plant Varieties**

National Register of Plant Varieties has been kept at the head office of the Registry, containing the names of all the registered plant varieties with the names and addresses of their respective breeders, the rights of such breeders in respect of the registered varieties, the particulars of the denomination of each registered variety, its seed or other propagating material along with specification of salient features thereof and such other matters as may be prescribed.

### **National Gene Bank**

Authority has established National Gene Bank to store the seed material including parental lines submitted by the breeders of the registered varieties. The seed lot is stored under low temperature conditions at 5 °C for the entire registration period, and if necessary after few years of storage in the National Gene Bank, the seed lot will be rejuvenated and replenished at the cost of the applicant. The seed stored in the National Gene Bank will be used for dispute settlement or when an exigency arises for invoking compulsory licensing provision. Such a seed deposition in the National Gene Bank would dissuade market malpractices or violations as the sample in custody can be drawn to verify the facts. When the period of registration granted lapses, the material automatically moves to public domain.

### **National Gene Fund**

A National Gene Fund has been established by the Authority to receive the contributions from:

- ✓ The benefit sharing received in the prescribed manner from the breeder of a variety or an essentially derived variety registered under the Act, or the propagating material of such variety or essentially derived variety, as the case may be
- ✓ The annual fee payable to the Authority by way of royalty
- ✓ The compensation deposited by breeders

- ✓ The contribution from any National and International organizations and other sources.
- ✓ The Gene Fund shall be utilized for:
- ✓ Any amount to be paid by way of benefit sharing.
- ✓ The compensation payable to the farmer/community of farmers’.
- ✓ The expenditure for supporting the conservation and sustainable use of genetic resources including *in-situ* and *ex-situ* collections and for strengthening the capability of the panchayat in carrying out such conservation and sustainable use.
- ✓ The expenditure of the schemes relating to benefit sharing.

### **Benefit Sharing**

The benefit sharing is one of the most important ingredients of the farmers’ rights. Section 26 provides benefit sharing and the claims can be submitted by the citizens of India or firms or non-governmental organization (NGOs) formed or established in India.

Depending upon the extent and nature of the use of genetic material of the claimant in the development of the variety along with commercial utility and demand in the market of the variety, breeder will deposit the amount in the Gene Fund. The amount deposited will be paid to the claimant from National Gene Fund. The Authority also publishes the contents of the certificate in the PVJI for the purpose of inviting claims for benefit sharing.

### **Rights of Community**

- ✓ It is compensation to village or local communities for their significant contribution in the evolution of variety which has been registered under the Act.
- ✓ Any person/group of persons/governmental or non-governmental organization, on behalf of any village/local community in India, can file in any notified centre, claim for contribution in the evolution of any variety.

### **Plant Varieties Protection Appellate tribunal**

The Act provides for establishment of Plant Varieties Protection Appellate Tribunal (PVPAT). All orders or decisions of the Registrar of Authority relating to registration of variety and orders or decisions of the Registrar relating to registration as agent or licensee can be appealed in the Tribunal. Further, all orders or decisions of Authority relating to benefit sharing, revocation of compulsory license and payment of compensation can also be appealed in the Tribunal. The decisions of the PVPAT can be challenged in High Court. The Tribunal shall dispose of the appeal within one year.

### **Reference:**

- ✓ <http://www.wto.org>

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