

Protecting Intellectual Property Rights in the Agricultural Sector of Trinidad and Tobago

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The debate over intellectual property rights (IPRs) appears to be between developed countries and the Third World, as developed countries have implemented laws and systems to manage and monitor IPRs and developing countries are seen as recalcitrant users, pirating intellectual property (IP), as laws and penalties are not enforced by governments who deem IP issues as unimportant and costly. A demand for exorbitant payment or restrictions for using IP is seen as contentious especially where food security and public health are at stake. However, since IPRs are now being included in Free Trade Agreements (FTAs) and developing countries may see some benefits from establishing property rights to the genetics of their natural resources among other things, there may be some basis for developing intellectual property protection (IPP) legislation according to their terms and conditions (Kerr, Hobbs, and Yampoin 1999).

IP, according to the World Intellectual Property Organisation (WIPO), refers to creations of the mind e.g. inventions, literary and artistic works, and symbols, names, images, and designs used in commerce (World Intellectual Property Organisation 2008). IPRs are a set of complex and multifaceted set of legal issues. “IPRs, such as patents, plant variety protection, copyrights, and trademarks, are exclusive monopoly rights over a creation that society provides to the inventor for a period of time” (Kuyek 2002). They legislate, not only for protecting of IP from piracy by enforcing payment of royalties, rules restricting or licensing use, but for the monitoring and enforcement of policies in cases of abuse of items thus protected. Patent protection in US law is usually enforceable for 17-20 years.

The World Trade Organisation (WTO)'s Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), introduced IP rules into the multilateral trading system for the first time in 1995. For the first time in the history of trade agreements, there would be mechanisms for dispute

settlement (World Trade Organisation 2008). According to the TRIPS agreement countries had to ensure that rights were applied and protected in each country for the following: ideas, processes, programmes, data, formulae, software, patents, layout-designs (topographies) of integrated circuits, industrial designs, trademarks, trade secrets, geographical indications, copyright and related rights, undisclosed information etc. (Roffe 2007).

In 1995 Trinidad and Tobago joined the WTO and as of July 23, 2008, there were 153 members (World Trade Organisation 2008) all with obligations to implement IP legislation as under the TRIPS agreement signatory countries are required to establish a prescribed minimal level of IPP (Lesser, 2001).

Prior to this, in the pre-TRIPS era when the Paris Convention for the Protection of Industrial Property (1883) and the Berne Convention on Copyrights (1886) were providing a certain amount of intellectual property protection (IPP), countries were able to design IP regimes to match their national needs, allowing certain items like, medicines and food products to be excluded from patents.

Trinidad and Tobago is a signatory to many treaties and is a member in several international bodies related to IP issues. The following is a list of the International Treaties of which Trinidad and Tobago is a signatory according to the WIPO Guide to Intellectual Property Worldwide (World Intellectual Property Organisation 2008):

Membership of WIPO Treaties:

- WIPO Convention, since August 1988.
- Paris Convention (Industrial Property), since August 1964.
- Berne Convention (Literary and Artistic Works), since August 1988
- PCT (Patents), since March 1994.
- Nice Agreement (International Classification of Goods and Services), since March 1996.
- Locarno Agreement (International Classification for Industrial Designs), since March 1996.
- Strasbourg Agreement (International Patent Classification), since December 1996.
- Geneva Convention (Unauthorized Duplication of Phonograms), since October 1988.
- Vienna Agreement (International Classification of the Figurative Elements of Marks), since

March 1996.

- Brussels Convention (Distribution of Programme-Carrying Signals Transmitted by Satellite), since November 1996.
- Budapest Treaty (Deposit of Micro-organisms), since March 1994.
- TLT (Trademarks), since April 1998.

WTO: Member and Signatory to TRIPS Agreement, since March 1995.

Membership of other bodies/treaties: UCC, UPOV.

- Member of UCC since May 1988.
- Member of UPOV since January 1998.

For over 50 years Trinidad and Tobago has been addressing IP issues with the passing of the Marks, Act (Consolidation), on January 1, 1955 (World Intellectual Property Organisation 2008). The Intellectual Property Office of Trinidad and Tobago, established in December 1997, provides the following list of laws addressing IP issues in Trinidad and Tobago (Intellectual Property Office 2008):

1. The Patents Act, 1996 (Act No. 21 of 1996). The Patents Amendment Act, 2000 (Act No. 54 of 2000).
2. The Trademark Act (Chapter 82:81) and Amendment (Act No. 17 of 1994, No. 25 of 1996, No. 31 of 1997).
3. The Geographical Indications Act, 1996 (Act No. 20 of 1996).
4. The Industrial Designs Act, 1996 (Act No. 18 of 1996).
5. The Layout-Designs (Topographies) of Integrated Circuits Act, 1996 (Act No. 19 of 1996).
6. The Protection of New Plant Varieties Act, 1997 (Act No. 7 of 1997).
7. The Copyright Act, 1997 (Act No. 8 of 1997).
8. The Protection Against Unfair Competition Act, 1996 (Act No. 27 of 1996).
9. The Miscellaneous Amendments Act (Intellectual Property), 2000 (Act No. 18 of 2000).

Appendix 1 lists the IP laws and regulations noted on the WIPO website.

For developing countries managing IPRs is a relatively new concept and it is expected to inspire creativity, reward innovativeness, stimulate trade, facilitate technology transfer and encourage foreign direct investments (FDI). Developed countries, which are highly organised and have access to many resources, especially the United States, have been insisting that developing countries implement IPR legislation. However, many third world countries have been taking their time to do so as the benefits in reality have been somewhat vague. Dianne Daley, one of Jamaica's top copyright lawyers, said that though Jamaica joined the WTO in 1995, they have not yet implemented the minimum requirements demanded by the TRIPS agreement (Daley 2008).

WIPO has suggested that insufficient information on the relevance of IP in day-to-day business, high costs associated with obtaining and enforcing IP rights, perceptions that the IP system is esoteric, too cumbersome and time-consuming are some reasons why small and emerging economies are sometimes slow to protect their intellectual property assets (World Intellectual Property Organisation 2008).

Despite developing countries not achieving the costly and time-consuming demands of the TRIPS agreement over the last thirteen years, most of the new FTAs go beyond in their IPR stipulations to what has been described as TRIPS-plus or TRIPS-extra (Roffe 2007; Pastor 2006). The European Union (EU) in accordance with its Global Europe strategy devoted an entire chapter on IP provisions in the EU-CARIFORUM Economic Partnership Agreement (EPA) which far surpass the requirements of the TRIPS and signatory countries have undertaken obligations for concrete implications (Roffe 2007; Corporate Europe Observatory 2008). Opinions have been expressed that "the EU's insistence on the inclusion of IPRs placed undue pressure on African, Caribbean and Pacific (ACP) countries to negotiate IPR provisions under an artificial and unnecessary deadline." CARIFORUM countries have until 2014 (but no later than 2021) to implement the EPA's provisions on IPR. Since the TRIPS agreement maintains the "Most Favoured Nation" clause, CARIFORUM countries are obligated to extend the same TRIPS-plus provisions to all WTO members including the upcoming FTAs with Canada as well as with the United States. Daley notes that:

“Also mandated under the agreement is the regional harmonisation of IP laws and regulations even at the level of IP rights management and enforcement. With at least (10) international IP agreements (including treaties and protocols) to be implemented one has to consider whether these arrangements will unleash enough benefits for CARIFORUM nationals to offset the inevitable burden of treaty obligations” (Daley 2008).

Pastor (2006) stated that FTAs appear to be designed in the sole interest of countries that are net-exporters of IP related goods, and thus put a burden on those countries that rely heavily on goods protected by IPRs and with developmental issues like public health (access to medicine); food security; protecting biodiversity and traditional knowledge; and effective transfer of technology.

In any case, Trinidad and Tobago has to be wary of and fully understand the legal and binding agreements to which they have signed. This would be imperative when dealing with the IPRs relevant to the agricultural sector in the interest of food security, sustainable agriculture, expanding agricultural exports, improving environmental safety, reducing malnutrition, and poverty alleviation.

Implementing and managing IP in the agricultural sector present many complex decisions for agricultural scientists, research managers and policy makers. In designing IPRs including mechanisms for monitoring, enforcement and penalties, policy makers will have to safeguard crop diversity and varieties adapted to local conditions as well as farmers’ rights (e.g. access to plant genetic material and seeds) and local entrepreneurs by protecting biotechnologies and innovations.

Some of IPRs which are relevant to agriculture are patents, plant variety protection, commercial marks such as trademarks and geographical indications, and trade secrets (Maredia 2001). In the area of biotechnology, patents can apply to microbes, genes, parts of genes, plant and animal varieties, some natural compounds and new medicines. The assignment of IPRs to living things is of relatively recent origin, even in developed countries. Vegetatively propagated plants were first made patentable in the US only in 1930. And the protection of plant varieties or plant breeder’s rights (PBRs), a new form of intellectual property, only became widespread in the second half of the 20th Century (Commission on Intellectual Property Rights 2002). It was after the landmark case of *Diamond vs Chakrabarty* in 1980

when the US Supreme court decided that new micro organisms not found in nature... “anything made by the hand of man that is new, non-obvious and useful”... could be patented that the biotechnology industry took off (Biotechnology Industry Organisation 2008). Table 1 describes the methods of protecting IP in the agricultural sector.

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Plant Variety Protection (PVP) statistics for the period 2002-2006 showed that at the end of 2006, the US had 4,418 plant varieties protected compared to TT who had applied for none (International Union for the Protection of New Varieties of Plants 2007)

Treaties affecting agricultural issues and the relevant IPRs are the basic PVP/PBRs in TRIPS, International Union for the Protection of New Varieties of Plants (UPOV), United Nations Convention on Biological Diversity (CBD) and the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA).

UPOV is an intergovernmental organisation, with headquarters in Geneva (Switzerland), currently comprised of 66 member states, established by an international convention on the protection of new varieties of plants by an IPR in 1961. The convention was revised three times -1972, 1978 and most recently in 1991, though some members still follow the rules of earlier forms of the convention (International Union for the Protection of New Varieties of Plants 2008)

The UPOV 1991 prevents farmers from saving seeds and exchange of seeds, to limiting them to saving seeds only for use in their own fields. However, though the CARIFORUM-EU EPA asks signatory countries to consider accession to UPOV 1991, it reiterates that TRIPS is the basis for protection of plant varieties (Daley 2008; Shabalala et al. 2008).

Biological diversity or biodiversity is the variety of life in all its forms on the earth and the diverse kinds of habitats in which these plants and animals live together. Biodiversity

includes genetic diversity, species diversity and ecosystem diversity (Environmental Management Authority 2008). The Convention on Biological Diversity (CBD) is an international treaty adopted in 1992 in Rio de Janeiro with the objective of developing national strategies for the conservation and sustainable use of biological diversity (Secretariat of the Convention on Biological Diversity 2008). Only 5 countries have not ratified this treaty, one of them being the United States. Though the treaty was signed by President Bill Clinton in 1994, it has not been ratified by the US Senate (Sovereignty International 1998). In accordance with accessioning to CBD, Trinidad and Tobago has developed a National Biodiversity Strategy and Action Plan (Environmental Management Authority 2008).

The FAO Conference in November 2001 approved the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA) which went into force in June 2004 and Trinidad and Tobago acceded in November 2004. This treaty seeks to establish principles for facilitating access to plant genetic resources and establishing fair and equitable mechanisms of benefit sharing (Food and Agriculture Organisation 2008; New 2008).

It is proposed that supporting IPRs can bring trade; innovation; agricultural development and increased food production by encouraging technology transfer and investment in research; and that introducing strong IPRs will enable poor farmers to take advantage of Genetically Modified (GM) crops. GM is a special set of technologies that alter the genetic makeup of animals, plants, or bacteria. GM crops are perceived as having both benefits e.g. increasing yield or providing additional nutrients (Golden Rice and Vitamin A (Krattiger, 2005) and causing problems, such as, cross pollen-contamination of local varieties. Some persons claim that it is unknown if GM crops may cause health problems in the long run. Friends of the Earth International has published a yearly report on "Who benefits from GM crops?" since 2006 (Friends of the Earth International 2008). A National Biosafety Plan drafted by the Caribbean Agricultural Research and Development Institute (CARDI) and related institutions was

submitted to the Trinidad and Tobago Government for ratification in 2005. This plan deals with many issues including managing “contamination” of GM crops.

It is prudent to note that developed countries patent biological resources in abundance for according to Moore (2004) “By 2002, the US Patent and Trademark Office had granted nearly 20,000 patents involving genes or other organic material.” Not surprisingly, PVP/PBR and GM crops which are claimed to have been designed to protect the interests of industrialised countries raises issues of food security as they may limit farmers’ access to genetic resources in developing countries by:

1. Encouraging the cultivation of a narrow range of genetically-uniform crops and worsening the nutritional value of people’s diets.
2. Limiting the freedom of farmers to acquire seeds they wish to plant.
3. Increasing the risks of disease outbreaks. Mass cultivation of uniform varieties can result in devastating diseases as happened with the potato crop in Ireland in the 1840s, and the United States with wheat and maize in the 1960s and 1970s respectively (Maredia 2001).

It has been suggested that the WTO plans to have more stringent penalties than retaliatory sanctions as currently obtains. This is because if the costs of sanctions do not outweigh the gains, countries will continue to infringe IPRs (Giannakas 2003).

For many developing countries, the costs of IPR regimes outweigh the benefits and may undermine long-term development. IPRs do little to encourage private research into crops with traits important to food security and often impede public research that could address these needs (Department for International Development 2004). Kuyek, (2002) when discussing African farms suggested that the push for IPRs was an attempt to privatise Africa’s innovative practices and biological resources and reorganise its seed markets for the benefit of foreign corporations (Kuyek 2002). Pray notes that whilst IPRs may encourage applied biotechnology research, his findings emphasize a limit of IPRs: market size counts. If you are in a country with a small market, no matter how strong your IPRs, firms may not invest in research. If companies do not do the research (on your issues), the products of biotechnology – insect

and disease resistant plants, will not be widely available to (your) farmers (Pray, Courtmanche, and Govindasamy 2001).

Other concerns expressed by many persons in developing countries are bio prospecting, bio piracy and stealing of traditional knowledge. Bio prospecting is the search of biological products with characteristics interesting for humankind and the possible resulting bio piracy refers to the collection, study and commercialization of biological and genetic resources without the free and prior informed consent of source communities and countries, and the application of intellectual property rights (IPRs) on these resources by multinational corporations in developed countries continue to be issues in developing (Cluis).

The successful conclusion of bio piracy case regarding the neem tree with the revocation of the US patent is well documented but eternal vigilance is required in order to maintain IPRs for local products and knowledge (Shiva 2008). There are many other bio piracy cases (called the modern colonisation by some) e.g. basmati rice, potatoes from South America, enola bean etc. By 2000, Rural Advancement Foundation International (RAFI) mentions that there were 147 suspected bio piracy cases reported (Gillette 2000).

In an effort to prevent biopiracy, developing countries may need to define IPRs in order to have recognition and protection of traditional knowledge. In July 2008, the Doha Round of the WTO talks failed and so too proposals to amend TRIPS to bring it in line with the CBD requirements. Developing countries proposed that companies requesting patents on biological organisms disclose the country of origin and declare that adequate compensation had been made to the country. This had to be verified before patents could be granted.

In Trinidad and Tobago, with respect to agriculture, we need to protect our rich biodiversity, traditional knowledge and extensive agricultural research. Is biopiracy involved in the fact that the University of Ulster and United Arab Emirates University are researching the paradoxical frog, *Pseudis paradoxa*, for treatment on diabetes? The frog which is native to Trinidad, secretes a substance from its

skin which protects it from infection and has the molecule, pseudin-2, which has been found to stimulate the release of insulin, the vital hormone which is deficient in diabetes sufferers (University of Ulster 2008). Does Trinidad and Tobago have the expertise and resources to fully investigate, understand, negotiate, design and implement the relevant legislation and contracts to manage IPRs and to monitor and enforce penalties?

In 2003 the Cabinet of the the Government of Trinidad and Tobago agreed to formulate an Intellectual Property Policy and in June 2008 the Government was able to ratify it. This policy outlines how Government plans:

- (1) to review the existing legislative framework for the protection of IPR, as well as review treaties, conventions and agreements to which Trinidad and Tobago are signatories or should be accessioned
- (2) to enact appropriate laws in relation to research, traditional knowledge, genetic resources and folklore
- (3) to strengthen institutions to administer IPR
- (4) to establish a IP Development Fund to support local inventors and other IP creators
- (5) to enforce IPRs (increasing penalties and simplify procedures for arrest and prosecution: training for law enforcement officers and dialogue with the Judiciary; implement consumer education programmes (Intellectual Property Office 2008)
- (6) to ensure that contracts for services and development projects have clauses addressing IPRs

In devising actual legislation framework, an example of the kinds of questions regarding research to be addressed is: To whom can/should the ownership of those property rights be assigned? (To the government or third-party sponsor of the research? To the institution where the work was conducted, or to the individual inventor?)(Graff 2007)

It would be interesting to know what the IPP arrangement is for the traditional knowledge that will arise in the Herbal Research Programme of the Trinidad and Tobago Health Sciences Initiative which

started in October 2007 between the University of Trinidad and Tobago and the Johns Hopkins Medicine International.

Agricultural research in Trinidad and Tobago, unlike developed countries, is like most developing countries where 90% is done in the public sector. The kind of research undertaken at the Ministry of Agriculture, Central Experiment Station in Centeno since 1943 has been on Crop Production (e.g. vegetables, fruits, root crops, cocoa, coffee, rice, ornamentals, medicinal plants and seed technology), Plant Protection (insect and other pest and disease control, plant quarantine), Livestock Production (cattle, buffaloes, goats, sheep, pigs, poultry, rabbits) (Ministry of Agriculture 2008; Maharaj and Ramkhelawan 2006) and at the Caribbean Agricultural Research and Development Institute (CARDI) commodity research programmes include small ruminants, sweet potato, and other root crops, cereals and grain legumes, hot peppers and fruits and vegetables, and herbs e.g. lemon grass and sorrel (Caribbean Agricultural Research and Development Institute 2008). As these studies are undertaken by publicly funded institutions, the results of the research is made available to the public, however, if the agricultural sector becomes privatised, then the dissemination of the results of research will be affected as the IPRs will belong to the private company.

Trinidad and Tobago's long history of agricultural research is also reflected in work done at the Imperial College of Tropical Agriculture (ICTA) which started in 1921. ICTA, which provided postgraduate training for persons from all over the British Empire and diploma courses to locals, was the second higher education institution to be built in the English-speaking Caribbean since Codrington College in Barbados in 1743. In 1960, the University College of the West Indies (UWCI) merged with ICTA to form a second campus of The University of the West Indies (UWI) at St. Augustine in Trinidad (Pemberton, Ragbir, and Pemberton 2000). Today, the Ministry of Agriculture, regional institutions like CARDI and the Faculty of Agriculture, UWI continues to do most of the research in agricultural sector.

An initiative being undertaken by UWI to preserve and make available its research whilst establishing IPRs to its contents is the UWISpace, an Institutional Repository of Research and Scholarship (Digital Libraries Services Centre 2008). Preservation is enabled by storing the data in a

format that will be retrievable when current equipment may not be able to read it. Some ICTA photos are already posted and there are plans to digitize and post over 1,060 ICTA projects/theses/reports.

Roffe (2006) states that in the past IP issues were relegated to be of interest to experts but as access to medicine, nutrition and access to knowledge are affected with the implementation of TRIPS and IPRs are now being included in FTAs, civil society has become conscious of the issues. Some organisations, such as NGOs like Genetic Resources Action International (GRAIN), propose that there should be no-patents on life. This is perceived as needed when a biotechnology firm with patent on genes can prevent labs from doing the research on diseases like cancer or Alzheimer's or demand payment from labs who wish to do so (Genetic Resources Action International 2008). Is civil society in Trinidad and Tobago going to join these voices?

In July 2008, Nobel Laureates, Professor Joseph Stiglitz and Professor John Sulston have been highly critical of the basic current framework of IP regimes as they claim that it stifles science and innovation. Developed countries are separated from developing countries by the disparity in access to knowledge and IP is making it harder to close the gap (Standeford 2008).

There has been another recent call to abandon the old ways of handling IP, saying that that system led to mistrust, encouraged extreme patenting and heavy royalties, did not treat with traditional knowledge etc. A report released in September 2008, states that the International Expert Group on Biotechnology, Innovation and Intellectual Property (a group of experts with expertise in law, medicine, philosophy, bioethics, economics, political science and management) are addressing how governments, industry and NGOs can better use intellectual property in biotechnology to develop and disseminate this century's needed health, agricultural and industrial products and services. The report addresses the ways in which the patent system could be enhanced so as to both increase innovation and ensure that it benefits people in both developed and developing countries. It states that while there has been a boom in biotechnology over

the last two decades, most biotechnology companies still have to make a profit and the number and quality of new medical therapies has declined while costs have increased. The world's present way of using intellectual property – the system that largely has supported biotechnological innovation – is undergoing a sea change that could, if properly managed, lead to greater innovation and to better meeting the needs of the world's population (Gold et al. 2008).

In recent times, in recognition of traditional knowledge, some biotechnology companies have been granting contracts which stipulates repayment to the local community. However, some contracts have been found to be unfair with persons signing contracts which they do not fully understand with the biotechnology firms getting the better part of the deal. IPRs, clearly, is another area where financial interests and ethics conflict and while resolutions are being sought the quality of millions, if not a billion, of lives are at stake.

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APPENDIX 1

LIST OF TRINIDAD AND TOBAGO LAWS AND REGULATIONS RELATING TO IP ISSUES

May 5, 2000	Intellectual Property (Miscellaneous Amendments), Act, 05/05/2000, No. 18
Jan 25, 2000	Copyright (Customs), Regulations, 25/01/2000
Jan 1, 1999	Plant Variety, Regulations, 1999
Jan 1, 1999	Copyright (Customs), Draft Regulations, 1999
Sep 11, 1997	Marks (Telefacsimile Transmission), Rules (Amendment), 11/09/1997
Jun 10, 1997	Marks (Packaging), Act (Amendment), 10/06/1997, No. 31
Apr 15, 1997	Copyright, Act, 15/04/1997, No. 8

Apr 15, 1997 Copyright, Act (Consolidation), 15/04/1997 (2000), No. 8 (No. 18)

Jan 1, 1997 Plant Variety, Act, 1997, No. 7

Oct 2, 1996 Geographical Indications, Regulations, 02/10/1996

Oct 2, 1996 Integrated Circuits, Rules, 02/10/1996

Oct 2, 1996 Designs, Rules, 02/10/1996

Aug 7, 1996 Unfair Competition, Act, 07/08/1996, No. 27

Aug 7, 1996 Unfair Competition, Act (Consolidation), 07/08/1996 (2000), No. 27 (No. 18)

Aug 5, 1996 Patents, Rules, 05/08/1996

July 19, 1996 Marks (Duration), Act (Amendment), 05/08/1996, No. 25

Jan 1, 1996 Patents, Act, 1996, No. 21

Jan 1, 1996 Integrated Circuits, Act, 1996, No. 19

Jan 1, 1996 Designs, Act, 1996, No. 18

Jan 1, 1996 Geographical Indications, Act, 1996, No. 20

Jan 1, 1996 Integrated Circuits, Act (Consolidation), 1996 (2000), No. 19 (No. 18)

Jan 1, 1996 Geographical Indications, Act (Consolidation), 1996 (2000), No. 20 (No. 18)

Jan 1, 1996 Patents, Act (Consolidation), 1996 (2000), No. 21 (No. 18)

Oct 17, 1994 Marks (Nice Classification), Rules (Amendment), 17/10/1994

Aug 19, 1994 Marks (Registration Opposition), Act (Amendment), 19/08/1994, No. 17

May 17, 1989 Copyright (International Conventions Organisations), Order, 17/05/1989

Source: World Intellectual Property Organisation

http://www.wipo.int/clea/en/search.jsp?cntryorg_id=117&cat_id=&order=date

APPENDIX 2 - LIST OF ACRONYMS

ACP African, Caribbean and Pacific

CARDI Caribbean Agricultural Research and Development Institute

CARIFORUM	CARICOM countries plus the Dominican Republic
CARICOM	Caribbean Community
CBD	Convention on Biological Diversity (of the United Nations)
EU	European Union
EPA	Economic Partnership Agreement
FAO	Food and Agricultural Organization (of the United Nations)
FDI	Foreign Direct Investment
FTA	Free Trade Agreement
GM	Genetically Modified
GRAIN	Genetic Resources Action International
GURTs	Genetic Use Restriction Technologies
ICTA	Imperial College of Tropical Agriculture
IP	Intellectual Property
IPP	Intellectual Property Protection
IPRs	Intellectual Property Rights
NGO	Non-Governmental Organisation
PBR	Plant Breeders' Rights
PVP	Plant Variety Protection
PVR	Plant Variety Rights
TRIPS	Trade Related Aspects of Intellectual Property Rights
UPOV	International Union for the Protection of New Varieties of Plants
UCWI	University College of the West Indies
UWI	The University of the West Indies
WIPO	World Intellectual Property Organization
WTO	World Trade Organization

