

Plant Variety Protection and Food Security in Ethiopia: A Critical Review

Mohammed NureGobena* Prof. D.SuryaPrakasaRao**

*Research Scholar in Law, Andhra University, Visakhapatnam, Andhra Pradesh, India.

**Chairman Faculty of Law & Former Principal at DR. B.R. Ambedkar College of Law, Andhra University,
Visakhapatnam, Andhra Pradesh, India.

Corresponding Author: Mohammed NureGobena

ABSTRACT: Protection of intellectual property rights of plant related inventions is a recent phenomenon. The protection of plant varieties is justified on the grounds that it encourages individuals' investment in agricultural research and development, increases agricultural productivity and promotes food security. The TRIPS agreement requires member countries to provide a patent or a sui generis system or a combination of both for the protection of plant varieties. Many developing countries have also adopted a UPOV modeled plant variety protection system. However, there are economic, social, legal and environmental concerns to the development of a strong plant variety regime in developing countries. Developing countries should design a plant variety protection system in such a way that it promotes biodiversity and food security, farmers' rights and protection of traditional knowledge in plant genetic resources. Ethiopia is one of the least developed and most food insecure countries in the world. Ethiopia has not adopted both the WTO-TRIPS agreement and the UPOV convention. It has no obligation to adopt a strong plant variety protection which restricts farmers' rights and traditional knowledge. However Ethiopia enacted its first plant variety law in 2006, which latter was replaced by a new proclamation, No.1068.2017. This research therefore examines the Ethiopian Plant variety protection in the lights of the country's food security concerns. The study is based on doctrinal legal research methods and the authors suggest that Ethiopia as one of the most food insecure country has to design a plant variety protection regime that best addresses its specific concerns of eradicating poverty and increasing food security.

KEY TERMS: - plant variety, protection, farmers' rights, food security, Intellectual property Rights

Date of Submission: 17-02-2019

Date of acceptance: 03-03-2019

I. BACKGROUND

The introduction of a proprietary regime in plant inventions is a recent phenomenon¹. Until very recently, living materials have been considered as a subject matter immune from proprietary regime. Protection of Plant variety is justified on the assumptions that it promotes agricultural productivity encourages individual seed breeders who have invested their money and time on agricultural research and development. The development of a plant variety protection is triggered by the adoption of the Trade Related Aspects of Intellectual Property Rights /hereafter referred to as the TRIPS/ agreement, which requires member states to provide patent or an effective sui generis system of plant variety protection or a combination of both for plant varieties. Accordingly many of the WTO members including the least developed ones have either acceded to the International Union for the Protection of New Plant Varieties/hereafter referred to as the UPOV/ convention or adopted a UPOV modeled plant variety protection regime.

Although Ethiopia has not yet acceded to any of the International Intellectual Property Rights Conventions, including the WTO-TRIPS² agreement and the UPOV, the development of a plant variety protection regime in Ethiopia can also be understood within the same framework. Ethiopia adopted its first plant

¹ The 1930 US Plant Patent Act was the first law that was adopted at national level to give protections to plants which are asexually reproduced. This act was enacted based on the pressure of plant breeders and nursery men. Although there were similar requests in Europe, however, they preferred to devise a different form of proprietary regime known as the Plant Variety Protection regime, which requires less stringent requirements than patents. The European Countries later on adopted an international convention for the protection of new varieties of Plants, known as the UPOV in 1961. This is commonly considered especially by the developed countries as an effective sui generis system.

² See https://www.wto.org/english/thewto_e/acc_e/a1_ethiopia_e.htm#status. Accessed on 01/02/2019. Although the current status of Ethiopia's accession is not clear, Ethiopia began the accession process in 2003 and Ethiopia's working Party was established on 10 February 2003.

breeders' rights proclamation³ in 2006, by a proclamation No. 481/2006. The proclamation recognizes, in its preamble, that the development of new plant varieties through research plays a significant role in improving agricultural production and productivity and that this requires considerable effort and investment. Therefore individuals engaged in the development of New Plant varieties should be recognized and economically rewarded so as to encourage their involvement in the sector.

Equally important, the proclamation recognizes the role of farmers and pastoral communities in the conservation and development of agro bio-diversity resources used to develop new plant varieties. This proclamation is however repealed and replaced by the current plant breeders' rights proclamation, proclamation no. 1068/2017 before it was actually put in to practice.

However the question is how the current Ethiopia plant variety protection law should balance the competing interests of the monopoly rights of a plant breeder of a new plant variety to that of the farming community in Ethiopia, who have been playing and continuous to play a great role in the conservation, development and used of plant genetic resources. This research therefore attempts to examine the Ethiopian plant variety protection regime in the lights of the country's food security interests. In other words, the review article analyzes the extent to which the rights of commercial plant breeders are counterbalanced with the rights of farmers and makes some suggestions on how the country's Plant Variety Protection should be re-designed. The study is primarily based on doctrinal legal research methodology. Both primary and secondary sources are used in the review study. Accordingly, although Ethiopia's economy is largely based on agriculture and that the smallholder farmers played an enormous role in the conservation and maintenance of plant genetic resources and while farmers are also the major producers and suppliers of crops, this study argues that the current Ethiopian plant breeders rights does not give sufficient protections to the farmers. Rather the current plant breeders' rights proclamation gives more priority to commercial plant breeders than small scale farmers who make-up the majority of the Ethiopian Population.

II. PROTECTION OF PLANT VARIETIES UNDER THE TRIPS AND UPOV CONVENTIONS

Plant variety rights are exclusive rights granted by national laws to a person who has developed a plant variety which is new and fulfills the Distinctness, uniformity and stability criteria. A plant variety is commonly defined as a plant grouping which are defined by certain characteristics resulting from a given genotype or combination of genotypes and distinguishing them, from other plant groupings by at least one characteristics. Besides domestic laws international conventions such as the UPOV and the TRIPS agreement constitute an international legal framework for the protection plant varieties.

2.1. The UPOV Convention

The UPOV convention is the first international agreement that provides for the protection of plant varieties at international level. The UPOV convention was adopted by 12 western European countries in 1961, and was revised three times in 1972, 1978 and finally in 1991. Now the last version to which new members may accede is the 1991 version. Some refer to this last version of the UPOV as the weakest form of Patents. Unlike the patents, the UPOV convention, especially the earlier versions, are praised for accommodating two competing interests. On the one hand the Convention intends to recognize and protect the exclusive rights of the commercial plant breeders. On the other hand the UPOV convention accommodates two important exceptions to the exclusive rights of the commercial plant breeder, i.e., breeders' exceptions and farmers' rights or privileges. . However, the 1991 version of the UPOV convention is criticized for strengthening the private appropriation of private seed breeders over plant genetic resources, by restricting the traditional right of farmers to saving and exchanging of crops, making farmers rights optional, extending the exclusive rights of the breeders of a new plant variety to include harvested materials and varieties essentially derived from a protected variety. Moreover the scope of application of the protected varieties is also extended to all plant genera and species. As will be discussed in the next section, the UPOV convention is not designed in such a way that these competing interests, i.e., the rights of commercial plant breeders and farmers rights are given equal importance.

³ A proclamation is a legislation which is passed by the House of Peoples Representatives. The current Ethiopian Constitution recognizes certain hierarchies in Law. At the top in the hierarchy is the Constitution itself which was adopted by the constituent assembly. On the basis of the FDRE constitution, which is the supreme law of the land, a proclamation is passed by the Parliament/House of Peoples Representative. The Council of Ministers pass a regulation while each Ministry may issue a directive. As per Article 2(2) of Proclamation No. 3/1995, all the Federal Laws should be published in the Negarit Gazette.

2.2. Plant Variety Protection under the TRIPS agreement

The WTO-TRIPS agreement requires under Article 27(1) member states to provide patent protection to inventions in all fields of technology, whether products or processes, imported or locally produced. However, the TRIPS agreement also allows member states to exclude certain inventions from patentability, which includes plants or animals. Article 27(2) of the agreement, also requires member states to provide patents or a sui generis form of plant variety protection or a combination of both. Accordingly many WTO member states including the least developed ones adopted the UPOV modeled laws considering the latter as an effective sui generis system which has been envisaged in the TRIPS agreement. The TRIPS agreement does not define as to what constitutes a sui generis system, nor does it implicate the UPOV system as a sui generis plant variety protection to be adopted by its members.

2.3. The Justifications for the Protection of Plant Varieties

Protection of plant varieties is a recent phenomenon which dates back to late 19th C. It is primarily based on the assumptions that plant breeding especially the conventional plant breeding through selection and crossing procedure is a laborious process⁴, which requires a lot of time, money and effort. In order to get a plant variety with the required trait, one has to select and breed multiple times. The protection of plant varieties is aimed at providing adequate incentives for creators, inventors and authors to invest their time, resources and intellectual capital needed to create intellectual property products⁵. Proponents argue that the protection of plant varieties promote private sector research and development to contribute to solve problems in the area of agriculture, health and nutrition facilitates transfer of technology and dissemination of state of the art and discourage confidentiality and trade secrets⁶. Plant variety protection is therefore justified on the grounds that it encourages individuals to invest in the development of new plant varieties which have enhanced qualities such as increased yield, resistance to pests and plant diseases, improving crops resistant to biotic and abiotic factors, such as drought, heat, frost and soil salinity.

2.4. Arguments Against the Adoption of a UPOV Modeled Plant variety Protection

Although the UPOV based Plant variety Protection regime is relatively liberal, compared to the patents, in allowing breeders exemptions and farmers' privileges critics argue that "the UPOV model of plant variety protection prioritizes the interests of commercial plant breeders' over that of the farmers, especially small and medium landholders who contribute the major part of the agriculture and food security in most developing countries."⁷ Developing countries which have not yet adopted the UPOV convention have the option to design a plant variety protection system which looks in to addresses their own concerns including food security and health. Different arguments are forwarded by scholars against the adoption a UPOV modeled plant variety protection regime. Some of the arguments include the following:

Most of the commercial plant breeders' are biotechnology companies which are based in the developed western countries, who are driven by market interests and Plant variety protection which is based on the UPOV may not encourage commercial plant breeders to investigate minor crops with small markets, which however are beneficial to the nutritional needs of the rural community⁸. The Plant variety protection regime rather than

⁴ Graham Dutfield, *Turning Plant Varieties into Intellectual Property: The UPOV Convention*, in A Guide to International Negotiations and Rules on Intellectual Property, Biodiversity and Food Security, edited by Geoff Tansey, and Tasmin Rajotte, (UK EarthScan, 2008). Accessed on 02/02/2019 <https://idl-bnc-idrc.dspacedirect.org/bitstream/handle/10625/35059/IDL-35059.pdf>.

⁵ Laurence R. Helfer, *Intellectual property rights in plant varieties International legal regimes and policy options for national governments*, Rome: Food and Agriculture Organization of the United Nations, (2004). Accessed on 02/02/2019 <http://www.fao.org/3/a-y5714e.pdf>.

⁶ Pedro Roffe. *Bringing Minimum Global Intellectual Property Standards into Agriculture: The Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS)*, in Tansey, Geoff and Rajotte, Tasmin (eds.), A Guide to International Negotiations and Rules on Intellectual Property, Biodiversity and Food Security, UK: Earth Scan (2008). Available at: <https://idl-bnc-idrc.dspacedirect.org/bitstream/handle/10625/35059/IDL-35059.pdf>. Accessed on 02/02/2019.

⁷ Carlos M. Corea et al., *Plant Variety Protection in Developing Countries a Tool for Designing a Sui Generis Plant Variety Protection System: An alternative to the UPOV 1991*. APBREBES, (2015). Accessed on 03/02/2019. <http://www.apbrebes.org/files/seeds/ToolEnglishcompleteDez15.pdf>.

⁸ Pedro Roffe, cited above at note 6, P. 112.

increasing food security, threatened food security and agricultural biodiversity⁹. In Kenya where Plant variety protection has been adopted out of the 136 applications made for plant variety registration since 1997, only one variety is found to be on a food crop, all the others were ornamental plants, such as the cut flower. 90 percent of these applications were filed by breeder companies outside the country¹⁰.

Another concern is that the plant variety protection regime, based on the UPOV system undermines the role of traditional farmers and indigenous community in the conservation, development and use of plant genetic resource, which today serve as a source of food and agriculture. While today's crop plants are the results of the cumulative efforts which the traditional farmers have made over the millennia, the current plant variety protection system gives the whole credit to the last person, the commercial plant breeder whose contribution is only very tiny.

Plant variety protection is also criticized for promoting genetic uniformity, which increases vulnerability to pests and plant diseases. The southern corn leaf blight which reduced 15 percent of the US corn field in 1970 is a good example in this respect¹¹. Similarly the loss of genetic variation, in the 1840's has also devastated Ireland's population and economy. Although the UPOV system allows farmers to save and re-sow farm saved seeds, its rules generally restrict farmer's freedom to buy seeds from sources other than the original breeder. This, in the long run creates a state of dependence among the farming community on the commercial seed breeders.

2.5. Sui Generis Model Proposed for Developing Countries

Besides extending protections to a commercial plant breeder an effective Sui generis system compatible with the TRIPS agreement, should be able to balance the rights of farmers and traditional communities. Professor Correa argues that, an effective sui generis system should not be considered as an option to the patent system, rather it has to be understood as an alternative to the existing exclusive rights or monopoly system¹². Correa argues that African countries should use various strategies to design a plant variety protection system which does not threaten their interests and the interests of their population. Some of the strategies include¹³: 1. Recognition and protection of farmers rights on equal terms with the commercial plant breeders and as strictly as the rights provide, 2. Allocating different durations to different rights to foster broader development policy goals, reducing the duration of commercial breeders rights as much as possible, while extending farmers rights as far as possible, 3. Developing a plant variety protection regime that complies with the country's other international commitments, such as the Convention on Biological Diversity, 4. Limiting the number of varieties that can be protected for commercial use.

A study commissioned by the World Bank that examined the situation in five developing countries (China, Columbia, India, Kenya, and Uganda) also suggested that, developing countries policy makers need to ensure that they have an IPR regime that is relevant to national conditions¹⁴. Noting that patent is not an option, the design of a suitable plant variety protection regime requires a dialogue and series of compromise among various stakeholders, including the commercial seed industry, public agricultural research, and farmers¹⁵. The commission further stated that "an IPR system for plant breeding must chart a careful course between providing sufficient incentives for investment in research and seed production while protecting seed security for resource-poor farmers."¹⁶ Empirical evidences also indicate that the most advanced nations like the USA, Japan and others themselves were using relaxed laws during their formative ages that enable them to imitate foreign technologies.

⁹ Perkins Muredzi and Emmanuel Sackey, *Food Security and Intellectual Property Rights – Lessons from Sub Saharan Africa* 2013. Accessed on 03/02/2019. https://www.researchgate.net/publication/283075707_Food_Security_and_Intellectual_Property_Rights_-_Lessons_from_Sub_Saharan_Africa.

¹⁰ Ibid.

¹¹ Viola Prifti *The Breeder's Exception to Patent Rights: Analysis of Compliance with Article 30 of the TRIPS Agreement*, (Switzerland: Springer International Publishing. 2015). Accessed on 03/02/2019. <https://www.springer.com/gp/book/9783319157702>.

¹² Carlos M. Corea., cited at note 7 above.

¹³ Ibid.

¹⁴ *Intellectual Property Rights Designing Regimes to Support Plant Breeding in Developing Countries*, Agriculture and Rural Development Department the International Bank for Reconstruction and Development / The World Bank, (2006). Accessed on 03/02/2019 http://siteresources.worldbank.org/INTARD/Resources/IPR_ESW.pdf.

¹⁵ Ibid. 45.

¹⁶ Ibid. 47.

III. PROTECTION OF PLANT VARIETIES UNDER ETHIOPIAN LAW

The Protection of plant varieties in Ethiopia should be understood within the context of the Ethiopian agriculture and seed production and supply. Accordingly, the next sub-sections present the reality in Ethiopia concerning the agricultural sector, plant breeding and food supply.

3.1. Overview of the Ethiopian Agriculture

Ethiopia is one of the least developed countries in sub-Saharan Africa. It is the second most populated country in Africa¹⁷. Ethiopia's economy is largely based on agriculture, which accounts nearly for 40 percent of the country's Gross Domestic Products (GDP), 90 percent of the total export and 85 percent of the total employment¹⁸. Although agriculture has been the main economic activity for many Ethiopians for centuries, the country has recurring food insecurity¹⁹. Rain-fed subsistence farming is the dominant form of agricultural production. Climate change, war and civil strife, internal displacements, population pressure, land fragmentations and technological adaptation were found to be the major determinants of food security in Ethiopia²⁰.

The majority of the Ethiopian population i.e. about 85 percent derives its livelihood from agriculture. Most of these are households with small land holdings, practicing crop farming. The average farm holding is estimated at 0.93 hectares with about 55 percent of farmers cultivating one hectare or less. Some 97 percent of crops are grown by smallholders who usually keep some livestock too. Pastoralists make up about 10 percent of the population²¹.

3.2. Seed Production and Distribution in Ethiopia

Basically there are two major types of seed systems in Ethiopia²²; the formal and the informal seed system. The formal seed system is referred to as formal because it is financed by government budget and many public institutions are involved in the production, marketing, distribution, and monitoring the quality of the seed. It is regulated under strict government regulation or law²³. Although five decades have lapsed since the formal seed system was established in Ethiopia, it only supplies 10 percent of the total seed to the Ethiopian farmers²⁴. Around 90 percent of the seeds are produced and distributed in the country by subsistent smallholder farmers. A large number of stakeholders are involved in the production, distribution and quality control of the formal seed sector in Ethiopia: namely, the National Agricultural Research System, Ministry of Agriculture and Natural Resources, Ethiopian Seed Enterprise, Farmers' Cooperative Unions, Regional seed enterprises and private seed companies specialized in on specific plants such as Pioneer.

The Informal Seed System also known as the Local or farmers seed system is a system in which farmers select their crops and local landraces/varieties, produce their own seeds, and/or locally exchange and purchase seeds²⁵. As the name itself signifies the informal seed system is one which is non-regulated accounts

¹⁷*The Demographic Profile of African Countries*, Addis Ababa: Economic Commission for Africa (2016). Accessed on 02/02/2019 https://www.uneca.org/sites/default/files/PublicationFiles/demographic_profile_rev_april_25.pdf.

¹⁸United Nations Development Assistance Framework, (2011-2015). Accessed on 17/01/2019. https://www.unicef.org/about/execboard/files/Ethiopia_UNDAF.pdf.

¹⁹ See Food Security Information Network, Global Report on Food Crises 2017, P. 20. Accessed on 02/02/2019. <http://www.fao.org/3/a-br323e.pdf>. Around 9% of the total population was estimated to be food insecure in 2016 in Ethiopia. The causes are mainly drought, conflict and civil insecurity which restrained people's access to food.

²⁰ Several studies were conducted to identify the determinants of food security or insecurity. Although there are differences in the scope of the studies, areas covered and variables measured, generally climate change, land degradation and fragmentation, war and civil strife, internal displacement, use of technology such as improved seed, fertilizers, amount used and fertility of land, population pressure, family size are found to be the major determinants for food security in Ethiopia.

²¹ United Nations Development Assistance Framework (2011-2015). P. 20.

²²AbebeAtilew, *A Baseline Survey on the Ethiopia Seed Sector*, Submitted to the African Trade Association, (2010), Accessed on 02/02/2019 at: <http://afsta.org/wp-content/uploads/documents/ETHIOPIA%20SEED%20SECTOR%20BASELINE%20STUDY.pdf>.

²³ Ibid.

²⁴ZewdieBishew, et al., *The status of the Ethiopian seed industry*, in Farmers, seeds and varieties: supporting informal seed supply in Ethiopia. Edited by Marja H. Thijssen., et al., (Wageningen, Wageningen International, 2008) Accessed on 02/02/2019: <http://edepot.wur.nl/18448>.

²⁵AbebeAtilew, Cited above at note 21.

for 90 percent of the seed system in Ethiopia²⁶. Ethiopian farmers have rich experiences of developing and maintaining plant genetic resources which serve as a basis for food and agriculture²⁷. They have long tradition of settled agriculture which significantly contributed to the evolution and maintenance of the country's rich agrobiodiversity²⁸. They have made a large contribution to the today's biological diversity which serves as a source for food and agriculture.

It is also noted that the majority of Ethiopian farmers prefer the informal seed system over the formal one for the following reasons²⁹: "it is relatively cheap and easily accessible in the farmers vicinity just when the seed is needed; It allows farmers to easily test as to its quality, yield, resistance to pests or diseases, while the farmer who adopted the seed; it is also more reliable and its sustainability is more guaranteed."

In addition to the formal and informal seed system there is also a system of seed known as integrated. This is because the line between the formal and informal seed sectors can become somewhat blurred, as seeds of improved varieties can be saved by farmers and eventually considered as "local variety" or "local seed" after some years of usage. In addition, in Ethiopia there have been attempts made by the government and NGOs to promote quality seed production and distribution through market channels for landrace varieties, although until now the volume they represent is quite small.

IV. PLANT VARIETY PROTECTION UNDER THE ETHIOPIAN PLANT BREEDERS' RIGHTS PROCLAMATION

This section argues that even if Ethiopia is not a WTO TRIPS member or adopted the UPOV convention, the current plant breeders' rights proclamation, as its name itself signifies, it is highly slanted towards the protection of the interests of commercial seed breeders. As pointed out in the introductory section the protection of plant breeders' rights also called, plant variety protection is based in Ethiopia, on the assumptions that development of new plant varieties promotes agricultural productivity and therefore it is essential to encourage those individuals who incurred a lot of money in the research and development so that they can recoup their money and to encourage those who have the interest to invest in the sector.

As pointed out in the introduction, Ethiopia has not yet acceded to the WTO, it has no international commitment to provide patent protection or a UPOV based plant variety protection regime. Accordingly, the first Ethiopian plant breeder's rights proclamation was enacted in 2006. However this proclamation was replaced in 2017, by another proclamation No. 1068/2017. The following are some of the salient features of the current Ethiopian Plant Breeders' Rights Proclamation, No. 1068/2017.

4.1. Scope of Application of the Plant Variety System

Concerning the scope of application of the Ethiopian plant variety law, the proclamation provides that it shall apply to all genera and species of plants throughout the country³⁰. Exceptionally however, certain genera or species may be excluded the directives of ministry of agriculture³¹. This is however a radical shift from its predecessor, i.e., the 2006 Ethiopia Plant Breeders' Rights proclamation and may amount to committing suicide. Ethiopia being the most food insecure country, where the livelihood of 85% of its population is based on agriculture and in a country where the production and supply of the seed sector is primarily based on the smallholder farmers and traditional communities, extending the protection of commercial plant varieties to all the genera and species seems, is either a hypocrisy or is not a well thought decision.

4.2. The Scope of Plant Breeder's Rights

The Exclusive rights of a plant breeder under Ethiopian law extend not only to the protected plant variety, but also to a variety essentially derived from the protected variety³². This provision is modeled on the 1991 version, the latest version, of the UPOV convention³³. This provision makes the right of a plant breeder

²⁶Ibid.

²⁷Ibid.

²⁸Ibid.

²⁹Ibid.

³⁰ A Proclamation to Provide for Plant Breeders' Rights, Proclamation No. 1068/2017, *Negarit Gazette*, 24th year, NO. 29, Addis Ababa. March 2018. Article 3.

³¹Ibid.

³²Article 5(2) (a) of the Current Ethiopian Plant Breeders' Rights Proclamation.

³³Article 14(5) of the 1991 UPOV convention.

4.3. The duration of a plant breeder's Rights

Corresponding to the minimum term of plant variety protection under the UPOV, the protection of plant breeders' rights under the Ethiopian law shall be, in the case of annual crops for a period of 20 years beginning from the date of the grant, and for 25 years in case of trees, vines and other perennial plants³⁴.

4.4. Farmers rights and Protection of traditional knowledge in plant genetic resources

The Current Ethiopian Plant breeders' rights proclamation recognizes and vows to give sufficient protections, in its preamble, to the customary knowledge and practice of saving, using and exchanging seed by farmers and pastoral communities of Ethiopia with their past, present and future roles in conserving the agro-biodiversity resources used to develop new varieties parallel to protecting plant breeders rights. It seems however that the recognitions given in the preamble remain to be theoretical than actual. Because, Article 7 of the proclamation which states about farmers' or pastoral communities rights defines the same as a right of the small holder farmer or pastoral community to save, use, exchange, and sell farm saved seed of any variety on the non-commercial marketing. 'Commercial marketing is defined as any trade in seed other than the marketing conducted between small holder farmers or pastoral communities or between small holder farmers or pastoral communities and their cooperatives³⁵'. It seems that this provision restricts the rights of a farmer or pastoral community to sell surplus products if any, on commercial market to a person other than the ones specified in the proclamation.

Moreover, the plant breeders' rights proclamation does not give equal attention to farmers and pastoral communities. It rather gives much attention to the recognition and protection of commercial plant breeders.

V. CONCLUSIONS

Despite the fact that Ethiopian economy is primarily based on subsistent agriculture, in which small holder farmers play a significant role in the production and supply of seeds and agricultural products, the Ethiopian Plant Breeders' Rights proclamation is not designed in such a way that it addresses the country's major concerns such as eradicating poverty and increasing food security. Ethiopia is currently is not bound by any international Intellectual property obligations. However the country has made an application to accede to the WTO long ago. The country may also be required to revise some of its laws in the interests of commercial partners. Thus Ethiopia has to balance these competing interests while revising policies and laws.

LIST OF REFERENCES

- [1]. Atilew, A., *A Baseline Survey on the Ethiopia Seed Sector*, Submitted to the African Trade Association, (2010), Accessed on 02/02/2019. <http://afsta.org/wp-content/uploads/documents/ETHIOPIA%20SEED%20SECTOR%20BASELINE%20STUDY.pdf>.
 - [2]. Bishaw, Zewdie, Yonas Sahlu and Belay Simane, *The Status of the Ethiopian Seed Industry*, in *Farmers, Seeds and Varieties: Supporting Informal Seed Supply in Ethiopia*. Edited by Marja H. Thijssen, Zewdie Bishaw, Abdurahman Beshir and Walter S. de Boef (Wageningen: Wageningen International, 2008), Accessed on 02/02/2019, <http://edepot.wur.nl/18448>.
 - [3]. Correa, C.M., Sangeeta Shaashikant, Francois Meienberg, *Plant Variety Protection in Developing Countries a Tool for Designing a Sui Generis Plant Variety Protection System: An alternative to the UPOV 1991*. APBREBES, (2015). Accessed on 03/02/2019 <http://www.apbrebes.org/files/seeds/ToolEnglishcompleteDez15.pdf>.
 - [4]. Graham Duffield, *Turning Plant Varieties into Intellectual Property: The UPOV Convention*, in, *A Guide to International Negotiations and Rules on Intellectual Property, Biodiversity and Food Security*, edited by Geoff Tansey and Tasmin Rajotte, (UK: EarthScan, 2008). Accessed on 02/02/2019 <https://idl-bnc-idrc.dspace.direct.org/bitstream/handle/10625/35059/IDL-35059.pdf>.
 - [5]. Helfer, L.R., *Intellectual property rights in plant varieties International legal regimes and policy options for national governments*, Rome: Food and Agriculture Organization of the United Nations, (2004). Accessed on 02/02/2019. <http://www.fao.org/3/a-y5714e.pdf>.
 - [6]. Muredzi, P. and Emanuel Sackey, *Food Security and Intellectual Property Rights – Lessons from Sub Saharan Africa* 2013. Accessed on 03/02/2019: https://www.researchgate.net/publication/283075707_Food_Security_and_Intellectual_Property_Rights_-_Lessons_from_Sub_Saharan_Africa.
 - [7]. Roffe, Pedro. *Bringing Minimum Global Intellectual Property Standards into Agriculture: The Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS)*, in *The Future Control of Food: A Guide to International Negotiations and Rules on Intellectual Property, Biodiversity and Food Security*, edited by Geoff Tansey and Tasmin Rajotte, (UK: Earth Scan, 2008). Accessed on 02/02/2019. <https://idl-bnc-idrc.dspace.direct.org/bitstream/handle/10625/35059/IDL-35059.pdf>.
- Laws**
- [8]. *Plant Breeder's Rights Proclamation, Proclamation No. 481/2006, Negarit Gazette, 24th year, No., 29, March 2018.*

Mohammed NureGobena. "Plant Variety Protection and Food Security in Ethiopia: A Critical Review." *International Journal of Business and Management Invention (IJBMI)*, vol. 08, no. 03, 2019, pp 20-26.

³⁴ Article 10 of Proclamation No. 1068/2017.

³⁵ Article 2(4) of the Proclamation.