Addis Ababa University

College of Law and Governance Studies

School of Law

Graduate Program

The Enforcement of Agreed Access and Benefit Sharing Terms Relating to Teff Genetic Resource with Particular Focus on Impending Legal Action by the Government of Ethiopia

A thesis Submitted in Partial Fulfillment of the Requirements of the Degree of Master of Laws (LL.M in Public International Law) to the School of Law, Addis Ababa University

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February, 2021

Addis Ababa, Ethiopia

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Declaration

I, **Fikremariam Ghion Melaku**, hereby declare that this thesis is my original work and has not been submitted for a degree in any other academic and research institution. And all sources used in this thesis have been duly acknowledged and cited.

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Confirmation

This thesis has been done by Fikremariam Ghion Melaku under my supervision and submitted for examination with my approval as an advisor.

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Acknowledgement

I would like to thank Biruk Haile (PhD), who advised me starting from the beginning to the end of this thesis. His comments helped me in all the time of research and writing of this thesis. Further, I would like to thank all of you who support me throughout writing this research paper.

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Abstract

The thesis analyzes impending legal action(s) that the government may apply for the enforcement of Ethiopian rights with regard to Teff GR. It analyzes IPR laws that have direct implication on ABS obligations. Further, issues including validity of Teff patent, PBR granted on Teff varieties that use Ethiopian Teff GR and bankruptcy claims are discussed. In doing these, ABS, DBA and relevant IP laws are analyzed. Doctrinal and qualitative methods are employed to analyze these issues. It is hard to find complementarity of IP and ABS laws. Moreover, there are ways to enforce violated Ethiopian rights and share the benefits derived from Teff GR. Some of the demanded bankruptcy claims of Ethiopian government against HPFI should not be filed as a bankruptcy claim. Legal, contractual, systemic and impending legal actions are recommended to implement and enforce ABS obligations.

Key words: GR, Access and Benefit Sharing, IPR, Teff patent, Teff agreement and bankruptcy

CHAPTER ONE

INTRODUCTION

1.1. Background of the study

Access Benefit Sharing (ABS) agreement as per Convention on Biological Diversity (CBD)[1] is meant to enter into contractual terms to establish processes for the fair and equitable sharing of benefits arising from the use of biodiversity between providers and users thereby contributing to the conservation and sustainable use of all biological diversity.[2] Article 15 of CBD states that, providers and users may expect a fair and equitable share of benefits that arises from the utilization of their Genetic Resources (GRs) upon Prior Informed Consent (PIC) and Mutually Agreed Terms (MAT). On this basis, Agreement on access to, and benefit sharing from, Teff Genetic Resource (Teff agreement) was signed on April 5, 2005 between the Institute of Biodiversity Conservation (now Ethiopian Biodiversity Institute, EBI), Ethiopian Agricultural Research Organization (now Ethiopian Institute of Agricultural Research, EIAR) and Health and Performance Food International B.V (HPFI).[3] The purpose of Teff agreement was mainly to provide HPFI with access to 12 specified Teff varieties[4] to produce a wide range of specified food and beverage products which are not traditional in Ethiopia.[5] In return, the company agreed to share benefits (monetary and non-monetary) with Ethiopia.[6] However, the only benefits reached to Ethiopia were only 4000 Euros and collaborative research project on Teff breeding which started on May 2006 and terminated earlier on April 2007.[7] In 2007, HPFI was granted

[1] The Convention on Biological Diversity (adopted 5 June 1992, entered into force 29 December 1993) 1760 UNTS 79 (CBD)

[2] Ibid, art 3

[3] The Agreement on Access to, and Benefit Sharing from Teff Genetic Resources, signed on April 5, 2005 (Teff agreement)

[4] Ibid, art 4.1

[5] Ibid, art 4.2

[6] Ibid, art 8

[7] Regine Andersen and Tone Winge, 'The Access and Benefit-Sharing Agreement on Teff Genetic Resources: Facts and Lessons' [2012] FNI 101

Teff patent from European Patent Organization (EPO)[8] and Plant breeder right (PBR) on three Teff varieties (*Tesfaya, Adina and Ayana*) was granted to Stichting SCEAR by Community Plant Variety Office (CPVO).[9]

On 4 August 2009, HPFI and Soil and Crop Improvements (S&C) was declared bankrupt and wound up on 11 March 2014.[10] And HPFI sold Teff patent for EUR 60,000 to partnership consisting of the HPFI directors called Ecosem and related companies (Port VOF, Ancientgrain B.V, Ecosem and Prograin International B.V) on 21 May 2008.[11] And Teff agreement was officially terminated at the time when Ethiopia sent her bankruptcy claim to the public receiver/curator of HPFI bankruptcy.[12] Further, HPFI transfers Teff seed stock to the new companies as well.[13] These breaches of contractual obligations placed Teff agreement in crossroads and whatever obligations the company assumed under the contract seem extinguished, placing the enforcement of Teff agreement in the hands of relevant European and Netherlands law.[14]

1.2. Statement of the problem

Enforcement of ABS agreements is challenging for countries that provide GR and associated traditional knowledge (ATK). Though countries adopt and take ABS measures, appropriation of GRs without PIC and MAT is still a problem. Especially, Intellectual property right laws (IPR) have a direct implication on the implementation of ABS obligations since IPR protections have

[8] Grant of European Patent on Teff flour processing, EP 1 646 287 B1 granted on 10 January 2007 (Teff patent)

[9] Nega Mirete, 'The Interface between Access to Genetic Resources, Benefit Sharing and Intellectual Property Right Laws in Ethiopia: Analysis of their Synergies' (LLM thesis, Addis Ababa University, 2010) 138-139

[10] 'Health & Performance Food International BV' (*GraydondGo* 2017) < https://graydongo.nl/nl/voeding-health-performance-food-international-bv-beilen-04050424> accessed 4 December 2019

[11] Anderson (n7) 115

[12] Official letter of 15 November 2011 from the Director General of the Institute of Biodiversity Conservation, Dr Gemedo Dalle to the public receiver of the HPFI bankruptcy, Mr. Rob Geene, Dommerolt Advocaten, Assen, The Netherlands (bankruptcy claims)

[13] Anderson (n7) 118

[14] Biruk Haile, 'Protection of Traditional Knowledge Related to Biological and Genetic Resources: Examining the Access and Benefit Sharing Regime in Ethiopia' [2015] WIPO-WTO Colloquium Papers, 63

been granted for inventions that uses GR without benefit sharing to the resource provider.[15] In order to reconcile the two regimes, disclosure requirement (DR) has been proposed in IPR laws though its nature, content and effect invited many debates.[16] Domestically, Ethiopia incorporates some contents of DR under its ABS and PBR laws. However, their effects and contribution of Intellectual property (IP) laws for the realization of ABS objective needs further investigation.

HPFI violates multiple provisions of Teff agreement and secures IPR protection over the use of Teff GR/ATK without sharing benefit obligation stipulated by the CBD and Teff agreement. Moreover, after HPFI went bankrupt, Ethiopia terminated the agreement in 2009 and sent a letter that contains her bankruptcy claim to the curator of HPFI bankruptcy.[17] Nonetheless, the validity of Ethiopian bankruptcy claim was not evaluated as per the applicable laws. Therefore, it is important to evaluate relevant terms and clauses of Teff agreement and bankruptcy claims of Ethiopia as per the Teff agreement and applicable laws.

1.3. Research questions

- Do Trade Related Aspects of Intellectual Property Rights (TRIPS) in support of the implementation of ABS objectives?
- Do domestic Patent and PBR laws facilitate or impede the implementation of ABS objectives?
- Are there any ground(s) to nullify European Patent granted on Teff GR (Teff patent)?
- Can Ethiopia claim benefit sharing from the three Teff varieties developed by Stichting SCEAR that used Ethiopian Teff seed samples?
- Could Ethiopia have launched valid bankruptcy claims on the basis of Teff agreement and Dutch Bankruptcy Act (DBA)?
- Are there sufficient clauses on Teff Agreement that guarantees the performance of it?

[15] Amirul Zakariah Asril and Badak Campus Gong, 'Access and Benefit Sharing: National Law and Islamic Perspective' [2017] 35(9) World Applied Sciences Journal 1666

[16] WIPO, Key Questions on Patent Disclosure Requirements for Genetic Resources and Traditional Knowledge (2nd edn, 2020) 13

[17] Bankruptcy claims (n12)

- Are the impending legal action(s) of the Government of Ethiopia towards the enforcement of its rights viable as per the applicable laws?

1.4. Research objectives

1.4.1. General objective

This study aims to explore the possible impending legal actions that are available to the Government of Ethiopia to enforce Ethiopian right associated with Teff GR and Teff agreement.

1.4.2. Specific objectives

- Evaluate whether TRIPS and domestic patent and PBR laws are in support of ABS objectives;
- Identify and evaluate possible grounds to nullify Teff patent granted on the basis of European Patent Convention;
- Explore legal grounds to claim benefit sharing from the protected three Teff varieties that uses Teff seed samples originated from Ethiopia;
- Evaluate the legality of Ethiopian bankruptcy claims as per Teff agreement and relevant laws;
- evaluate the sufficiency of guarantees of Teff agreement and;
- Explore the impending legal action(s) that the government of Ethiopia may take.

1.5. Methodology of the research

Doctrinal method will be employed since it is vital to investigate international and national laws that govern ABS, IP and bankruptcy. Besides, qualitative method will be used to collect data and make an investigation of applicable laws relevant for the enforcement of violated Ethiopian rights. In order to answer research questions, primary and secondary sources of data will be used. Key respondents from EBI, Ethiopian Intellectual Property Office (EIPO) and Ministry of Agriculture (MoA) will be interviewed. Moreover, ABS and IPR laws, Dutch Bankruptcy Act (DBA) and decision of a court (decision of Hague court in relation to Dutch Teff patent) will be used as a primary source of data. Books, journal article, commentaries on laws, working and

study papers, reports, thesis, and relevant web sources are employed as secondary sources of data.

1.6. Significance of the research

The study would help appropriate government authorities to take an action with regard to violated Ethiopian rights on Teff GR and alert them to be curious in drafting and negotiating future ABS agreements.

1.7. Scope of the research

This study confined to analyze Teff agreement, IPR protection granted on Teff GR and the validity of Ethiopian bankruptcy claim as per the applicable laws.

1.8. Limitation of the research

In availability of sufficient reports on the bankruptcy proceeding of HPFI limits in-depth analysis of this research. Although there are many IP laws, the researcher is only confined with TRIPS and domestic patent and PBR laws of Ethiopia.

1.9. Organization of the thesis

The thesis is divided into five chapters. The first chapter shows proposal of the theses. The concept and link between ABS, IPR laws and DR will be discussed in chapter two. The third chapter evaluates grounds to challenge the validity of Teff patent and PBR granted on Teff GR. The fourth chapter discusses Ethiopian bankruptcy claims as per the Teff agreement and applicable laws. Conclusions and recommendations will be dealt in the final chapter.

CHAPTER TWO

ACCESS AND BENEFIT SHARING, INTELLECTUAL PROPERTY AND DISCLOSURE REQUIREMENT

2.1. The concept and link between ABS and IPRs

Genetic Resources were considered as common heritage of mankind before the CBD.[18] This consideration makes them freely accessible. Countries provide access to their GRs for various purposes (invention, technologies, research, plant breeding and conservation) without any benefit.[19] This expedites loss of biodiversity that led to tragedy of commons.[20] Absence of regulation led to depletion of GRs as long as individuals accumulate benefits and exploit them unsustainably and the cost will be borne by the community as a whole.[21]

As a result, CBD was adopted in 1992 that allowed regulation of GRs through ABS measures as one of its objectives to contribute for the conservation and sustainable use of biodiversity.[22] IPR issues were discussed intensively as one of the channels to misappropriate GR/ATK and the resultant compromise is the adoption of article 16(5) of CBD.[23] This article explicitly refers to IP

[18] Kuei-Jung ni, 'Legal Aspects of Prior Informed Consent on Access to Genetic Resources: An Analysis of Global Law making and Local Implementation Toward an Optimal Normative Construction' [2009] 42(227) Vanderbilt Journal of Transnational Law 228

[19] Fikremarkos Merso, 'Challenges and Prospects of Implementing the Access and Benefit Sharing Regime of the Convention of Biological Diversity in Africa: the Case of Ethiopia'[2010] 10(3) International Environmental Agreements: Politics, Law and Economics 250

[20] Aykut Coban 'Caught Between State Sovereign Rights and Property Rights: Regulating Biodiversity' [2004] 11(4) Review of International Political Economy 743

[21]Graham Dutfield, 'Sharing the Benefits of Biodiversity: Access Regimes and Intellectual Property Rights' (1999) Science, Technology and Development Discussion Paper No.6, Center for International Development and Belfer Center for Science and International Affairs, Harvard University, p.4 <http://ipbio.org/pdfs/papers/discussion6.pdf> accessed 15 December 2019

[22] CBD (n1), art 3

[23] Carlos MC, Shashikant S and Meienberg F, 'Plant Variety Protection in Developing Countries A Tool for Designing a Sui Generis Plant Variety Protection System: An Alternative to UPOV 1991' (2015) APBREBES

laws, particularly patents, only in the context of access to and transfers of technology and exchange of information. It also provides that Contracting Parties should take legislative, administrative or policy measures relating to access and transfer of technology including technology protected by patents and other IPRs.[24] This necessitates further dialogue as to how IPR regimes could realize the CBD objective. Then Bonn Guideline was adopted.[25]

Bonn Guideline provides set of guidance, *inter alia*; the contents of ABS contracts, the link between IPR and ABS. User countries within their jurisdiction encourage users of GR/ATK to disclose the origin of GR/ATK in their IPR applications to track the compliance of PIC and MAT and discourage unfair trade practice.[26] Though Bonn Guideline includes some reference to IPR clauses in ABS agreement, reporting and means of verification, it has paid insignificant attention to monitoring measure.[27] Parties to the CBD so far has been limited in implementing user measures in general, let alone providing for systematic monitoring for the purpose of ABS.[28]

2.2. Disclosure Requirement

2.2.1. Meaning and objective

Disclosure requirement (DR) refers to the obligation of an applicant to disclose the source/origin of GR/ATK, grant of PIC and establishment of MAT for access to GR/ATK in IPR applications

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working paper, p.19 <https://www.apbrebes.org/files/seeds/ToolEnglishcompleteDez15.pdf> accessed 15 December 2019

[24] WIPO 'Technical Study on Disclosure Requirements in Patent Systems Related to Genetic Resources and Traditional Knowledge' (2004) WIPO Study No.3, p.13 <https://www.wipo.int/edocs/pubdocs/en/tk/786/wipo_pub_786.pdf> accessed 15 December 2019

[25] Bonn Guidelines on Access to Genetic Resources and Fair and Equitable Sharing of the Benefits Arising out of Their Utilization, Secretariat of the Convention on Biological Diversity adopted, by the Conference of the Parties to the Convention at its sixth meeting, held in The Hague in April 2002

[26] Joshua D Sarnoff and Carlos M Correa, Analysis of Options for Implementing Disclosure of Origin Requirements in Intellectual Property Applications (UNCTAD 2006) 3

[27] Bonn Guideline (n25)

[28] Elisa Morgera and others, Unraveling the Nagoya Protocol: A Commentary on the Nagoya Protocol on Access and Benefit-sharing to the Convention on Biological Diversity (Brill 2015) 273

(patent and PBR).[29] In IPR system, DR may provide and facilitate environmental sustainability and flow of GR by incentivizing the resource providers;[30] address misappropriation of GR/ATK by preventing grant of erroneous patent;[31] complement property and competition policies by tackling problems of inventor, fraud, and abuse of rights by generating more precision in the determination of the scope of the patent claims;[32] transparency and credibility of the patent system;[33] and strengthen mutual supportiveness and complementarity between IP and ABS regimes.[34]

2.2.2. Nature of DR

2.2.2.1. Voluntary

Voluntary disclosure is not followed by sanction but it encourages the disclosure of origin/source of GR relevant to the protection sought. This can be exemplified by the German patent act which requires disclosure of geographical origin of biological material when it is used for inventions.[35] Failure to disclose such information doesn't bar further examination of application and validity of granted patent.[36]

2.2.2.2. Mandatory

Mandatory disclosure may take the form of a mere formality in the patent procedure, with potential consequences for the pre-grant phase, or it can be considered as a patentability criterion

[29] UNCTAD, The Convention on Biological Diversity and the Nagoya Protocol: Intellectual Property Implications: A Handbook on the Interface between Global Access and Benefit Sharing Rules and Intellectual Property (UNCTAD 2014) 59

[30] Martha Chouchena-Rojas and others, Disclosure Requirements: Ensuring mutual supportiveness between the WTO TRIPS and the CBD (IUCN 2005) 27

[31] Tenth Meeting of the COP to the CBD, ' Summary Highlight of Tenth Meeting of the COP of the CBD' (*IISD* 2010), p.3 < https://enb.iisd.org/biodiv/cop10/> accessed 24 December 2019

[32] Chouchena-Rojas (n30) 25

[33] Ibid

[34] WIPO (n16)

[35] Germany Patent Act 1980 as amended 2017, art 34a(1)

[36] Ibid

followed by sanction (rejection of application, rejection of title in the prosecution or revocation/invalidation).[37]

DR of formality nature may contain information regarding names of inventor(s) and their addresses, priority documents, disclosure of prior art, and application in a prescribed physical format.[38] For example, article 49a of Switzerland's Federal acts on patents requires disclosure of source of GR/ATK where the invention is directly relying on.[39] Failure or willful false disclosure of such information is followed by fines.[40] In some jurisdictions, the patent applicant must submit in its application, not only source but also grant of PIC for inventions that uses GR/ATK.[41] And failure to satisfy such requirements amounts to criminal liability.[42] However, such duty to disclosure may not affect examination of patent applications or validity of granted patents.[43]

Whereas, substantive criterion of DR is generally related to the nature of invention and underlying criteria of patentability.[44] For example, the South African Patent Act states that the patent applicant must furnish proof of his title or authority to make use of the indigenous biological resource or TK (disclosure of origin, PIC and MAT).[45] If no biological resources are disclosed, the applicant must state that no biological resources were use. However, making a false statement can result in revocation of granted patent.[46] Though three patent applications

[37] Graham Dutfield, 'Thinking Aloud on Disclosure of Origin' (2005) Quaker International Affairs Program of the Quaker United Nations Office, Occasional paper 18, p.2 <https://quno.org/sites/default/files/resources/OP18-Dutfield.pdf> accessed 15 December 2019

[38] Edmund W Kitch, 'The Nature and Function of the Patent System' [1977] 20(2) The Journal of Law and Economics 286

[39] Swiss Federal Act of June 25, 1954 on Patents for Inventions (status as of January 1, 2012),

[40] Ibid, art 81a

[41] Act No. 9 of December 15, 1967 on patents (The Norwegian Patents Act) section 8(b).

[42] Ibid

[43] Ibid

[44] WIPO (n16) 23

[45] South Africa: Section 30 (3A and 3B) of the Patents Amendment Act (Act No. 20 of 2005)

[46] Ibid, art 61(1)(g)

were made that uses GR/ATK of South Africa, they were abandoned due to lack of evidence of ABS agreement with the relevant community.[47]

2.3. International ABS related laws

2.3.1. CBD and Bonn Guideline

On the basis of national sovereignty of States over their natural resources, the CBD emerges with ABS frameworks for access to GR/ATK and fair and equitable benefit sharing of benefits arising from the utilization of GR.[48] Article 15(1) of the CBD recognizes contracting States sovereign right to regulate their GR as per their national regulatory framework. The convention is not intended to provide property rights over GR, but it rather gives sovereign rights limited by the obligation to facilitate and not impose restriction on access to GR.[49]

Article 15(1) of CBD recognizes sovereign right of Contracting State to require access to their GR on the basis of PIC granted and MAT established. Especially, article 15(7) states that contracting Parties shall take regulatory measures for sharing of benefits that result from research and development, commercial and other utilization of GRs on the basis of MAT. This potentially implies that provider country measures are not enough to effectively implement ABS unless user country measures put in place to monitor use of GR under their jurisdiction.[50] Monitoring the use of GR through IPR laws can be one possible measure since IPR laws can have direct impact on ABS. Article 16(5) of the CBD tries to emphasize the impact of IP laws particularly patents and calls for cooperation of Parties to make sure that IPR laws are supportive of the realization of

[47] Margo A. Bagley, 'Toward an Effective Indigenous Knowledge Protection Regime Case Study of South Africa' [2018] Papers No. 207/2018, CIGI 20

[48] CBD (n1), art 15(1)

[49] Michael I Jeffery, 'Bioprospecting: Access to Genetic Resources and Benefit Sharing under the Convention on Biodiversity and the Bonn Guidelines' [2006] 6 Singapore Journal of International & Comparative Law 762

[50] Morten Tvedt and Tomme Young, 'Beyond Access: Exploring Implementation of the Fair and Equitable Sharing Commitment in the CBD' (2007) IUCN, Policy and Law Paper No. 67/2, p.76. <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.737.2551&rep=rep1&type=pdf> accessed 23 January 2020

CBD objective. In this regard, TRIPS[51] and domestic IP laws (patent and PBR) can be mentioned as IPR laws that have direct implication for ABS but not resolving misappropriation of GR since they do not take ABS conditions into consideration. Nevertheless, the CBD is silent about specific measures as to how use of GR will be monitored.[52] And CBD comes up with Bonn Guideline in order to elaborate and implement the ABS objective of the CBD.[53]

Bonn Guideline is voluntarily applicable legal instrument to complement and clarify the implementation of various provisions of the CBD.[54] It assists and guides Parties in establishing legislative, administrative or policy measures on ABS.[55] Chapter two of the Guideline describes roles and responsibilities of stakeholders in ABS; particularly article 16(c) and (d) enumerate various commitments of provider and user countries. User countries should take measures to encourage users in their jurisdiction to disclose origin of GR/ATK in their application for IP protection and they have also to take measures aimed to prevent use of GR without PIC of provider of such GR.[56] Nonetheless, it provides concrete user country measures that are designed to prevent use of GR/ATK without complying applicable ABS requirements of providers.[57]

2.3.2. Nagoya Protocol

The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity (Nagoya

[51] TRIPS: Agreement on Trade-Related Aspects of Intellectual Property Rights, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, 1868 UNTS 186

[52] Morgera (n28)

[53] Bonn Guideline (n25)

[54] Miriam Dross and Franziska Wolff, 'New Elements of the International Regime on Access and Benefit Sharing of Genetic Resources- the Role of Certificates of Origin-'(2005) Federal Agency for Nature Conservation, study paper, p.15 <https://www.oeko.de/oekodoc/233/2005-001-en.pdf> accessed 14 December 2019

[55] Bonn Guideline (n25), art 1

[56] Ibid, art 16 (d)(ii) and (iii)

[57] Stephen Tully, 'The Bonn Guidelines on Access to Genetic Resources and Benefit Sharing' [2003] 12(1) Review of European Comparative and International Environmental Law 91

Protocol) is a supplementary agreement to the CBD.[58] It applies to GR/ATK that are covered by the CBD, and to the benefits arising from their utilization.[59] It provides legally binding rules on compliance obligation in ABS framework with a view to clarify conceptual difficulties arising in the context of ABS under article 15.7 of CBD.[60]

Compliance obligation especially DR, list of checkpoints (along with information they intended to gather) and consequences of non-compliance are intensively debated during negotiation of Nagoya Protocol.[61] Developing nations argued that the need for DR and mentioning list of checkpoints including patent offices should be taken as mandatory as ABS obligations are usually violated through IPR protection.[62] They stressed that patent offices are the most appropriate and effective checkpoints to monitor the use of GR/ATK as such offices are the early stages of R&D and commercialization processes.[63] Whereas, industrialized nations saw that the establishment of common standards/reference points on access is more important than listing specific checkpoints and particularly taking patent offices as a checkpoint.[64] They argued that mandatory DR in patent offices and list of checkpoints would be costly and ineffective in fighting off misappropriation while at the same time invoking non-compliance with the international patent system would have a risk of undermining innovation.[65] However, the

[58] The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity (adopted 29 October 2010, entered into force on 12 October 2014) 3009 UNTS

[59] Ibid, art 3

[60] Matthias Buck and Clare Hamilton, 'The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity' [2011] 20(1) Review of European Comparative and International Environmental Law 52

[61] Tenth Meeting of the COP to the CBD (n31)

[62] Buck (n60) 53

[63] Timothy J Hodges and Anne Daniel, 'Promises and Pitfalls: First Steps on the Road to the International Access and Benefit Sharing Regime' [2005] 14(2) Review of European Comparative and International Environmental Law 149

[64] Thomas Greiber and others, An Explanatory Guide to the Nagoya Protocol on Access and Benefit-sharing (IUCN, Gland, Switzerland in collaboration with the IUCN Environmental Law Centre, Bonn, Germany 2012) 159

[65] Elisa Morgera and Elsa Tsioumani, 'The Evolution of Benefit Sharing: Linking Biodiversity and Community Livelihoods' [2010] 19(2) Review of European Community & International Environmental Law 168-169

Protocol is eventually adopted with a range of tools and mechanism to monitor the use of GR under article 15, 16, 17 and 18.

According to article 15(1) of the Protocol, *each Party* has an obligation to take *'appropriate, effective and proportionate'* national measures to provide for the respect of provider countries national ABS measures. User countries obliged to adopt domestic measures irrespective of their waiver of rights to require PIC for access to their GR.[66] Meaning, though user country waive its rights to demand PIC before accessing to its GR, it should take user country measures to support the implementation of provider country ABS requirement.[67] In addition, article 15(2) obliges Parties to address situations where a user within jurisdiction is found to be in non-compliance with the provider country measures. This is meant to elaborate those remedies and sanctions of user country will be enforced against the user, for breaching user-side measures on compliance with PIC and MAT requirements of the provider country.[68] This provision does not intend to create an obligation for each Party to recognize and apply provider country law in its jurisdiction, but, user country is obliged to take measures in cases of violations of provider country ABS requirements by its own law.[69] In this regard, the Protocol is not intended to give extraterritorial application of provider countries legal requirement under user country.[70] Rather, only remedies and sanctions provided under user country could be enforced, while the remedies and sanctions provided in the law of the provider country could not be enforced extraterritorially.[71] In any case the Protocol requires user countries task to request users in their jurisdiction that they accessed the GR on the basis of provider party ABS requirements.[72] The Protocol calls for cooperation of

[66] Greiber (n64) 160

[67] Morgera (n28) 254

[68] Ibid

[69] Morten Tvedt, Beyond Nagoya: Towards a legally functional system of access and benefit sharing. in Sebastian Oberthür and G Kristin Rosendal (eds), Global Governance of Genetic Resources: Access and Benefit Sharing After the Nagoya Protocol (Routledge 2014) 173

[70] Greiber (n64) 160

[71] Claudio Chiarolla, 'Biopiracy and the Role of Private International Law under the Nagoya Protocol', Working papers no.02/12, IDDRI, p.12 <https://www.iddri.org/sites/default/files/import/publications/wp0212_chiarolla_pil-nagoya_web.pdf> accessed 20 December 2019

[72] Compliance Measures for Users from the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization in the Union (EU) 511/2014 [2014] OJ 2 150/59, art

Parties in cases of alleged violations of domestic ABS requirements.[73] This cooperation may include sharing investigations and exchanging information regarding the alleged violation of ABS requirements.[74]

Monitoring obligation through checkpoints was the heart of negotiation where some Parties expected reinforcement of compliance measure with specific obligation on monitoring and with the mandatory establishment of predetermined checkpoints.[75] Checkpoints have the responsibility to monitor the utilization of GRs by collecting or receiving relevant information with respect to PIC, the source of the GR, the establishment of MAT, and/or the utilization of GR.[76]The Protocol only obliges the designation of at least one checkpoint but leaves the nature of such entity for the parties themselves. Therefore, Parties may take measure to designate their patent office as a checkpoint to ensure compliance obligation.[77]

However, the Protocol left what measures can be considered as *'effective', 'Proportional', 'appropriate'* or measures necessary for effective monitoring, tracking and reporting requirements to support compliance.[78] Though the effectiveness of compliance measure will be assessed on practical cases of violations of ABS requirements, so far, there has been no report of violation of ABS requirement to the conference of parties to the Nagoya Protocol.

3(1) states: '*Users shall exercise due diligence to ascertain that Genetic Resources and traditional knowledge associated with Genetic Resources used were accessed in accordance with applicable access and benefit-sharing legislation or regulatory requirements and that, where relevant, benefits are fairly and equitably shared upon mutually agreed terms'* (EU Compliance Measures on ABS)

[73] Nagoya Protocol (n58), art 15(3)

[74] Greiber (n64) 164

[75] Buck (n60) 53

[76] Nagoya Protocol (n58), art 17(1)(a)(i)

[77] Wallace Feng, 'Appropriation without Benefit-Sharing: Origin-of-Resource Disclosure Requirements and Enforcement under TRIPS and the Nagoya Protocol ' [2017] 18(1) Chicago Journal of International Law 275

[78] Abdul Haseeb Ansari and Lekha Laxman, 'A Review of the International Framework for Access and Benefit Sharing of Genetic Resources with Special Reference to the Nagoya Protocol' [2013] 16(1) Asian Pacific Journal of Environmental Law 131

2.4. International IPR related law

2.4.1. TRIPS Agreement

TRIPS agreement provides minimum requirements of IP protection, which must be incorporated through domestic law by its members unless specifically exempted by the World Trade Organization (WTO) as in the case of the Least Developed Countries.[79] On the other hand CBD acknowledges the impacts of patents and other IPR and call Parties to cooperate to ensure that such rights are supportive of and do not run counter to its objective. In 1990's there were various misappropriation cases of GR/ATK (such as *quinoa, ayahuasca, the neem tree, kava, barbasco, endod and turmeric*) were reported by developing countries that question on mutual supportiveness of IP laws (especially TRIPS) with CBD.[80] In 1999, the relationship between TRIPS and CBD has become a major focus of discussion in the TRIPS Council within the context of review of Article 27.3(b) and formalized in the 2001 Doha Declaration (para.19).[81] In 2001, the interface between CBD and TRIPS was given a higher concern and TRIPS Council was mandated to examine among others, the relationship between TRIPS and CBD and other relevant new developments raised by Members pursuant to Article 71.1.[82]

The first proposals introduced were in the context of the mandated review of Article 27.3(b) and making TRIPS and CBD complement each other.[83] However, after considerable debate on placement of disclosure proposal, the debate was shifted to article 29 of TRIPS which states

[79] TRIPS (n51), art 66

[80] Carlos M Correa, Strengthening the TRIPS-CBD relationship: Is a compromise deal possible at the WTO? in Alexander Werth and Susanne Reyes-knoche (eds), Triggering the Synergies between Intellectual Property Rights and Biodiversity (GTZ GmbH 2010) 52

[81] WTO, 'Ministerial Declaration' (*Ministerial Conference*, 2001), para 19 <https://docs.wto.org/dol2fe/Pages/FE_Search/FE_S_S009-DP.aspx?language=E&CatalogueIdList=37246&CurrentCatalogueIdIndex=0&FullTextSearch> accessed 12 September 2019

[82] Ibid

[83] Grain, 'Official country positions and proposals on TRIPS Article 273(b)' (*Official country positions and proposals on TRIPS Article 27.3(b)*, 6 October 2004) <https://www.grain.org/en/article/3526-official-country-positions-and-proposals-on-trips-article-27-3-b> accessed 19 December 2020

general disclosure obligation.[84] Various draft amendment proposals were communicated which describe the scope and purpose of disclosure obligation relating to invention that uses GR as part of the TRIPS minimum standards on IP.[85] Developing countries proposes draft amendment that requires the applicants to disclose of origin/source of GR/ATK used in the invention, PIC and MAT;[86] member Parties are obliged to publish information disclosed by patent applicant;[87] patent applications must not be processed without DR;[88] and post grant measures need to be taken in cases where the patent applicant failed to disclose or gave erroneous/fraudulent disclosure (administrative and criminal sanction, fines and adequate compensation for the damage and revocation).[89] This proposal is supported by developing countries due to the fact that contract system established by CBD and Nagoya Protocol is by no means sufficient to deal with the problems of misappropriation, bad patents, and illegitimate bioprospecting.[90] As far as national contracts[91] and database of GR/ATK is concerned,[92] developing countries defend the proposed TRIPS amendment by arguing that such systems will not ensure international enforcement of ABS obligation and a binding international obligation as necessary.[93] This is based on the expectation that DR in patent applications will contribute to prevent

[84] Correa (n80)

[85] WTO, 'TRIPS: Review, Article 27(3)(b) and Related Issues: background and current situation' (*WTO*, 2008) <https://www.wto.org/english/tratop_e/trips_e/art27_3b_background_e.htm> accessed 12 December 2019

[86] Draft Decision to Enhance Mutual Supportiveness Between the TRIPS and CBD, communication from Brazil, China, Columbia, India, Indonesia, Peru, Thailand, the ACP and African Group, See WTO document TN/C/W/59 of 19 April 2011

[87] Ibid

[88] Ibid

[89] Ibid

[90] Paul Kuruk, 'Regulating Access to Traditional Knowledge and Genetic Resources: The Disclosure Requirement as a Strategy to Combat Biopiracy' [2015] 17(1) San Diego International Law Journal 44

[91] Communication from the United States, Views of the United States on the Relationship between the CBD and TRIPS, See WTO document IP/C/W/257 of 18 November 2005

[92] The Patent System and Genetic Resources, communication from Japan, See WTO document IP/C/W/472 of 13 June 2006

[93] Draft Decision to Enhance Mutual Supportiveness Between the TRIPS and CBD (n86)

misappropriation of GR, grant of erroneous patents and enhance transparency of use of GR/ATK.[94]

One of major opponents of DR, United States of America (USA), has opinion that there is no conflict between CBD and TRIPS and they should be implemented in a mutually supportive manner.[95] USA argue that any DR in TRIPS would create legal uncertainty and other negative consequences and national legislation and contract based solution is suited for ABS concerns.[96] Contract-based systems can be part of civil and criminal codes specifically designed to enforce ABS laws and they can be international in character (may contain, *inter alia*, choice of forum, choice of law, or international arbitration provisions) relevant to cross-boundary dispute or enforcement issues.[97] Furthermore, USA mentioned that it is more appropriate to strengthen national regimes outside patent systems in order to address all instances of commercialization of misappropriated GR/ATK that need to be addressed regardless of whether these instances involve patenting or not.[98] With respect to erroneous patents, proposals such as use of searchable, organized prior art databases and post-grant opposition and/or re-examination procedure can directly achieve to prevent issuance of erroneous patents.[99]

Similarly, European Union (EU) mentioned that nothing in the two agreements prevent a country from fulfilling its obligation since the two set of laws are not at conflict and they are dealing with different subject matter.[100] For example, CBD does not prohibit patents on inventions using GR, whereas, TRIPS does not prevent signatories of CBD from exercising their right to regulate their

[94] Third world network, Nagoya Protocol on Access to Genetic Resource and the Fair and Equitable Sharing of Benefits Arising From Their Utilization: Background and Analysis (1 edn, Third World Network 2013) 44

[95] Article 27.3(b), Relationship between TRIPS and CBD, and The Protection of Traditional Knowledge and Folklore, communication from the United States, see WTO document IP/C/W/469 OF 13 March 2006, P.2

[96] Ibid

[97] Ibid 5

[98] Ibid 6

[99] Ibid 2

[100] Review of Article 27.3(b) of the TRIPS, and the relationship between the TRIPS and CBD and the Protection of Traditional Knowledge and Folklore, communication from European Union, See WTO document IP/C/383 of 17 October 2002, p.8

GR.[101] However, EU recognizes the existence of possible interaction between the two treaties in areas of biotechnology, plant breeding, TK and benefit-sharing and agrees on DR proposal but disagrees on its nature and consequences of failure to disclose, insufficient or erroneous disclosure.[102] According to EU, nature of DR and consequences of failure to disclosure should be dealt outside patent system.[103]

Generally, both developing and developed nations agreed to harmonize the two treaties. However, they differ on the nature, placement and consequences of DR. This is because of the fact that, developed countries are not interested to include mandatory DR in their patent system since they strongly argue that, it will not effectively avoid bad or erroneous patents and they want to establish another system to overcome the problem by proposing database and contract based system. Particularly, EU addresses issues of DR outside the patent system in line with their position of TRIPS amendment.[104] Meanwhile, none of amendment proposals to harmonize TRIPS and CBD have been agreed yet.

2.5. Domestic ABS regime

2.5.1. Legal and institutional settings

The initiative to regulate the collection, dispatch, import and export of biological resources in Ethiopia started in 1998 when the Institute of Biodiversity Conservation and Research (IBCR) was established.[105] Then IBCR was reorganized and established as Institute of Biodiversity

[101] Ibid

[102] Ibid

[103] Ibid 2

[104] EU Compliance Measures on ABS (n72)

[105] Establishment of Institute of Biodiversity Conservation and Research Proclamation, 1998, Art.6 (20), Proc. No. 120, Fed. Neg.Gaz., year 4, no.19.

Conservation.[106] And currently with additional of objectives and mandates, it was re-established as Ethiopian Biodiversity Institute (EBI).[107]

Access to Genetic Resources and Community Knowledge, and Community Rights Proclamation (ABS Proclamation)[108] and its implementing Regulation[109] was promulgated in 2006 and 2009 respectively with the objectives of conservation, sustainable utilization and fair and equitable benefit sharing arising from the use of Ethiopia's biodiversity resources.[110] In order to attain these objectives, the Proclamation requires the fulfillment of different conditions. Primarily, the one who wants to access GR/ATK should have to secure access permit from EBI.[111] However, permit is not required in cases where customary use and exchange of GR/ATK by and among Ethiopian Local communities and in cases of sale of products of biological resources for direct consumption, that do not involve the use of GR thereof.[112] Moreover, access permit is not required for domestic public research and higher learning institutions and intergovernmental institutions based in the country.[113]

When coming to access permit procedure, PIC and MAT are the two fundamental conditions of access. In cases to access to GR and ATK, the Institute and concerned local community has the right to give PIC, respectively.[114] The ownership of GR is vested on the State and Ethiopian people and the Institute has authorized to regulate access to GR through the granting of PIC.[115]

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[106] Institute of Biodiversity Conservation and Research Establishment (Amendment) Proclamation, 2004, Proc. No. 381, Fed. Neg.Gaz., year 10, no.16.

[107] Ethiopian Biodiversity Institute Council of Ministers Regulation, 2005, Reg. No. 291, Fed. Neg.Gaz., year 19, no.57.

[108] Access to Genetic Resources and Community Knowledge, and Community Rights Proclamation, 2006, Proc. No. 482, Fed. Neg.Gaz., year 13, no.13. (ABS Proclamation)

[109] Access to Genetic Resources and Community Knowledge, and Community Rights Council of Ministers Regulation, 2009, Reg. No. 169, Fed. Neg.Gaz., year 15, no.67 (ABS Regulation)

[110] ABS Proclamation (n108), art 3

[111] Ibid, art 11(1)

[112] Ibid, art 4(2)(a) and (b)

[113] Ibid, art 15(1)

[114] Ibid, art 12(1) and (2)

[115] Ibid, art 5(1)

And, local communities have the rights to grant PIC for access to their TK since they are the owner of their TK.[116]

The other condition to access to GR/ATK is the establishment of conclusion of access agreement.[117] And each access agreement must specify benefits that the State and local communities share from the use of GR/ATK.[118] This study focuses on one of the benefits known as joint ownership of IPRs.[119]

2.5.2. ABS law and IPRs

ABS Proclamation provides an obligation of access permit holder. Among the obligations, article 17(12) states that where access permit holder seeks to acquire IPR over the GR accessed or parts thereof, he must negotiate new agreement with EBI based on relevant laws of Ethiopia. This article contains important elements worthy of discussion. First, the phrase *'IPR over GR accessed or parts thereof'* implies that IPRs could be claimed in the GR or its components (isolated or purified genes).[120] However, is it possible to get IP protection on mere discoveries without inventive work on GR? If you see the requirements to get patent and PBR protection, you cannot find any requirement that accept mere discoveries as a protectable subject matter. Proclamation on Inventions, Minor Inventions and Industrial Designs (Patent Proclamation)[121] and Plant Breeders Right proclamation (PBR Proclamation)[122] can be mentioned as relevant laws that cannot give IP protection over GR or its components without new inventive effort. It is difficult to conclude that the law makers intends to allow IPR protection over GR or parts thereof

[116] Ibid, art 5(2)

[117] Ibid, art 14(2)

[118] Ibid, art 16(9) and (10)

[119] Ibid, art 19(6)

[120] Fikrenmarkos Merso and Imeru Tamrat, 'Some Thoughts on the Benefit and Costs of the Regulatory Framework on Access to Genetic Resources and Benefit Sharing in Ethiopia' [2010] 24(1) Journal of Ethiopian Law 137

[121] Proclamation concerning Inventions, Minor Inventions and Industrial Design, 1995, Proc. No. 123, Transitional Government of Ethiopia. Neg.Gaz., year 54, no.25 (Patent Proclamation)

[122] Plant Breeders Right Proclamation, 2017, Proc. No. 1068, Fed. Neg.Gaz., year 24, no.9 (PBR Proclamation)

without some sort of human ingenuity.[123] Therefore, this provision should be amended to prohibit IPR protection over GR and parts thereof without innovative effort.

The duty to negotiate new ABS agreement whenever access permit holder seeks IPR protection on the GR accessed is another condition. Since some of the benefits are materialized at the later stage of use of GR than at the time of conclusion of ABS agreement, this obligation may capture benefits that are materialized at later stage through the negotiation of new ABS agreement.[124] This may give an opportunity to negotiate the jurisdiction to which IPR application will be filed so that EBI can identify jurisdictions that adopt DR and compliance measures on ABS.[125] Also it may create a chance to know and identify which set of IPR (patent or PBR) are tabled for protection that EBI interested in.[126]

Currently, EBI prepares draft new ABS Proclamation[127] which introduces and deletes some phrases on article 17(12) of ABS Proclamation. Article 18(12) of draft new ABS Proclamation states:

> *'Where he seeks to acquire intellectual property rights over the GR accessed or parts thereof, he shall apply to the Intellectual Property Office, based on relevant laws of Ethiopia. He shall also notify this to the Institute'*

On the basis of this provision, if access permit holder has the desire to seek IPR protection, he has to communicate its desire to the Institute. Upon such notification, EBI will get the opportunity to trace the type of protection and the jurisdiction where IPR application lodged. Nevertheless, this new article completely forbids the chance to negotiate and new ABS agreement provided by the ABS Proclamation discussed above. Therefore, in revising the ABS Proclamation, EBI must take into account additional obligations than that already provided by the ABS Proclamation to maximize the benefit sharing.

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[123] Merso (n120)

[124] Interview with Melesse Mario (PhD), Director General of Ethiopian Biodiversity Institute, EBI (Addis Ababa 20 June, 2020)

[125] Ibid

[126] Ibid

[127] Draft new ABS Proclamation (appendix III)

The other important provision is article 17(14) of ABS Proclamation, which states that access permit holder has the obligation to:

> *'Recognize the locality from where the GR/ATK was accessed from as origin in any application for commercial property protection of the product developed there from'*

On the basis of this article, an access permit holder is only obliged to disclose the origin of GR/ATK he/she/it accessed for property right protection of the product developed therefrom. And the law leaves disclosure of PIC and MAT as an obligation of access permit holder. Then the question is, how could EBI be informed about IPR application sought by access permit holder that uses GR accessed? What consequences would follow for noncompliance of this obligation? Do patent and PBR laws play important role? The following discussions show impacts of IP laws on ABS obligations.

2.6. Domestic IPR laws

2.6.1. Patents

Since the emergence of ABS, obligation of DR in IPR applications, particularly in patents and PBR laws gain much concern. On the basis of Proclamation on Inventions, Minor Inventions and Industrial Designs, the one who wants to get patent protection for his/her/its invention must disclose important information *inter alia*, the description and claim(s) of the invention.[128] The description shall disclose the invention in a manner sufficiently clear and complete for the invention to be carried out by a person having ordinary skill in the art and the applicant indicate at least one mode known to the applicant for carrying out the invention.[129] Patent claim(s) shall define clearly and concisely the matter for which protection is sought and fully supported by the description.[130] It's clear that disclosure of such information may enable skilled person in the art to carry out the invention claimed.

[128] Patent Proclamation (n121), art 9(3)

[129] Ibid, art 9(4)(b)

[130] Ibid, art 9(4)(c)

Conventional disclosure requirement exists with respect to information that is material to the patentability of claim(s).[131] Conventional disclosure requirements normally don't require disclosure of origin/source of GR/ATK, because such information is often not strictly relevant to enable for practicing of the invention or support claims.[132] However, information regarding origin/source of GR/ATK may be disclosed in a patent application if the applicant believes that unless such information disclosed, the skilled person in the art may not practice the claimed invention. For example, Rule 31(1) (a) of EPC states that:

> *'If an invention involves the use of or concerns biological material which is not available to the public and which cannot be described in the European patent application in such a manner as to enable the invention to be carried out by a person skilled in the art, the invention shall only be regarded as being disclosed only where, a sample of the biological material has been deposited with a recognized depositary institution [….] '*[133]

This presupposes that access to samples of GRs may be material and necessary to enable a person skilled in the art to practice the claimed invention without undue experimentation.[134] Meaning, deposition of sample of GR should be material to enable a person who has ordinary skill in the art to carry out the claimed invention.

Patent disclosure related to GR/ATK primarily focus to ensure whether GR/ATK have been accessed as per ABS requirement.[135] And proof of legal status of GR/ATK requested from patent applicants cannot be considered as necessary to the patentability requirements since it doesn't give disclosure of technical information to enable skilled person in the art to practice it.[136] Hence, it has no connection with conventional patent disclosure.[137] On the other hand, patent disclosure may improve compliance with standard patent protection requirements, especially

[131] WIPO (n16) 11

[132] Ibid

[133] Implementing Regulations to the Convention on the Grant of European Patents (2018), Rule 31(1)(a)

[134] WIPO (n16) 11

[135] Ibid 12

[136] Ibid

[137] Ibid

novelty requirement.[138] A proper scope of disclosure of information associated to GR/ATK may help to ensure that relevant prior art is considered in the examination of the patent application thereby reducing the risk of grant of erroneous patent.[139]

Science, Technology and Innovation policy of Ethiopia, pays significant attention to establish and implement IP system that ensures effective protection of indigenous GRs and IP assets of the nation besides bringing benefit out of them.[140] One of the tools to implement this policy direction will be through the incorporation of DR in IP systems in order to monitor and share the use and benefits that arises from their utilization. However, Patent Proclamation does not require patent applicants to disclose the origin of GR, PIC and MAT in their patent application that uses GR/ATK. Failure to incorporate DR in Patent Proclamation may be justified by various reasons. Lack of robust or advanced biotechnological inventions inside Ethiopia can be mentioned.[141] Mr. Fikre Tesfaye informed me that he questions the necessity to incorporate DR in the patent law at the moment where almost no biotechnological researches and inventions have taken place.[142] Moreover, he mentioned that without biotechnological inventions in the country, incorporating DR would pose fear for investors who are intending to invest in this sector since it would not be too difficult to monitor the use of Ethiopian GR that is utilized in Ethiopia without DR.[143] Since many of the patents are granted in developed world, it has no significant importance in incorporating DR in Patent Proclamation and it will be more effective to include in international IP laws, particularly TRIPS.[144]

As discussed under section 2.5.2 of this thesis, ABS law tries to introduce the necessity of complementarity of IP laws with ABS objectives by obliging access permit holder to disclose the locality of GR one accesses and negotiates new ABS agreement whenever one wants to acquire IPR protection over the use of GR. Though this obligation is provided in the ABS Proclamation,

[138] Ibid

[139] Ibid

[140] Ethiopian Science, Technology and Innovation policy (2012), p.15

[141] Interview with Fikre Tesfaye Hailemariam, Director of Patent Protection and Technology Transfer Directorate, EIPO (Addis Ababa, Ethiopia, 23 July 2020)

[142] Ibid

[143] Ibid

[144] Ibid

the Patent Proclamation doesn't require DR from patent applicants that use GR/ATK. In this regard, Mr. Fikre Tesfaye gave the opinion that Ethiopian Intellectual Property Office (EIPO), has not yet received any application that uses GR/ATK.[145] If that happens, EIPO is not obliged to follow procedures of ABS Proclamation since the obligation to disclose the origin of GR is only given to access permit holder and there is no law that obliges EIPO to request the patent applicants to disclose the origin of GR in their patent applications.[146] From legal point of view, the author of this thesis agrees with Mr. Fikre since there is no law that obliges EIPO to request evidence of disclosure of origin from applicants that uses GR in their patent application. Therefore, the existing Patent Proclamation should be revised to incorporate DR for patent applicants that use GR/ATK in order to support ABS objectives.

2.6.2. Plant breeder right law

Ethiopia introduced Plant Breeders Right Proclamation no. 481/2006 in 2006 (repealed PBR Proclamation).[147] However, this law was not practically implemented and repealed by the new Plant Breeders Right Proclamation no. 1068/2017 which was enacted in 2017 (PBR Proclamation).[148] It aims to protect private sectors engaged in breeding activities; ensures the compatibility of domestic PBR laws with that of international standard of protection; establishes accountable and transparent working system that resolve disputes arising among breeders.[149] Additionally, the government is aware of the necessity and appropriateness to maintain TK and practices with regard to saving, using and exchanging farmers and pastoralist communities with their role in conserving agro-biodiversity resources which are used to develop new plant varieties and protection of their varieties.[150] In relation to discussion of DR, the thesis only focuses on article 5(3), 15(2) and 18(1) of the PBR Proclamation.

Article 5(3) of the PBR Proclamation states that PBR shall only be granted where:

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[145] Ibid

[146] Ibid

[147] Plant Breeders Right Proclamation, 2006, Proc. No. 481, Fed. Neg.Gaz., year 13, no.13 (Repealed PBR Proclamation)

[148] PBR Proclamation (n122)

[149] Ibid, preamble

[150] Ibid, art 4(3)

'an improved variety is developed using material from a farmers' or pastoral communities' variety, wild relatives of crop plant and other varieties and community knowledge a plant breeder's right may only be granted and exercised if the breeder has, in accordance with prevailing national laws on access and benefit sharing of biodiversity of the country:

a) Obtained prior informed consent on the use of that material and the associated knowledge; and

b) Concluded a benefit sharing agreement on mutually agreed terms'[151]

And article 15(2) of the same law states that, every applicant:

'*Shall submit a sworn affidavit, together with supporting documentation, declaring the following conditions:*

a) the origin or source of the GR used to breed or develop the variety

b) that the genetic or breeder seed used in breeding or developing the variety was lawfully acquired and, where applicable, in compliance with the requirements of prior informed consent and benefit sharing'[152]

Finally, article 18(1) states that the Ministry shall grant PBR if it satisfies:

'a) the criteria, eligibility and application procedure set forth in article 4, 11 and 15 of this Proclamation have been met;

c) the breeder proven that he has obtained the GR used to develop the variety in accordance with the relevant laws on access to GR […]'.

On the basis of these provisions, proof of DR (disclosure of Origin of GR, PIC and MAT) and applicable ABS requirement is a necessary condition to grant breeders rights. Making DR a mandatory obligation is exactly the same approach with the repealed PBR Proclamation.[153]

[151] Ibid, art 5(3)(a) and (b)

[152] Ibid, art 15(2)

[153] Repealed PBR Proclamation (n147), art 14(2)

However, the repealed PBR Proclamation does not require disclosure of origin as a condition to grant plant variety protection, rather it obliges the applicant to prove that GR used for breed acquired on the basis of ABS Proclamation.[154] Article 14(2) of ABS Proclamation only requires PIC and MAT for granting access to GR. Therefore, PBR Proclamation includes all disclosure requirements as a condition before issuance of PBR rights that used GR.

What does it mean '*prevailing national laws on access and benefit sharing of biodiversity of the country*' and *'relevant laws on access to GR'* stipulated under article 5(3) and 18(1) (c) of PBR Proclamation, respectively? The interpretation of these phrases is argumentative. One line of interpretation states that the mention of relevant laws in the two provisions must be read in conjunction with article 11(1) of the PBR Proclamation which states:

> *'Any plant breeder whether he is an Ethiopian or foreign national, or resident in Ethiopia or elsewhere, may apply for plant breeder right in respect of new plant variety that is either bred locally or abroad'.*

The cumulative reading of these provisions, may give that Ethiopian law tries to consider the applicability of DR irrespective of the source of GR, be it in Ethiopia or elsewhere. This interpretation seems to comply with user country measures that are provided by Nagoya Protocol.

Another line of interpretation, which the author propounds is that, the law only tries to incorporate requirements of domestic ABS law and does not intend to recognize extraterritorial application of ABS law of foreign country in case of breeder rights. This is more clarified by the Amharic version of article 5(3) which states: *'[…] በሀገሪቷ የብዝሀ ሕይወት ሀብትና የማኅበረሰብ ዕውቀት አርክቦትና የማህበረሰብ መብቶች ሕግ በሚፈቅደው መሠረት ሲሆን'*. This means Access to Genetic Resources and Community Knowledge, and Community Right law of the country, ABS Proclamation. Whenever there is a discrepancy in Amharic and English version of the laws, Amharic version will prevail.[155] Therefore, PBR Proclamation is designed to recognize Ethiopian law on the subject. The other incidental question will be what would happen

[154] Ibid

[155] Establishment of Federal Negarit Gazeta Proclamation, 1995, Art.2 (4), Proc. No. 3, Fed. Neg.Gaz., year 1, no.3

if the breeder used non-Ethiopian GR? In this situation, the breeder is obliged to declare only the source of the GR that he used to develop the new variety.[156]

The law also provides civil and criminal sanction for failure/erroneous disclosure. Article 25(1)(a) states that: PBR will be revoked in cases where *'it is proved that the variety was not new or that facts exists which, if known before the granting of the right, would have resulted in rejection of the application'.* Disclosure of origin of GR, PIC and MAT are obviously a factual circumstances evidenced by production of necessary document. Besides, if PBR is obtained by fraudulent practices, the Ministry may not only revoke the granted right, but it also refers the matter to appropriate organ to establish criminal liability.[157] Therefore, the law contains DR and consequences of failure/erroneous disclosure so far discussed in this chapter.

[156] Interview with Medemdemiyaw Nekinikie, Senior Variety Release and Protection Expert, Ministry of Agriculture (Addis Ababa 27 June, 2020)

[157] PBR Proclamation (n122) art 25(1)(c)

CHAPTER THREE

TEFF AGREEMENT AND INTELLECTUAL PROPERTY RIGHTS

3.1. Background of Teff Agreement

Before the conclusion of Teff Agreement in 2005, Memorandum of Understanding on Research & Development of International Market for Teff based Products were signed between EIAR, Larenstein University and S&C in 16 March 2003 (MoU).[158]

The major aim was to register, undertake research and utilization of Teff varieties.[159] To ensure benefit sharing from the protection of PBR, S&C was given the responsibility to register Ethiopian Teff varieties outside Ethiopia under the name of EIAR.[160] S&C has the right to use such Teff varieties worldwide on the basis of royalty payment and the new varieties developed by S&C will be jointly owned by EIAR.[161] Teff fund was also introduced with the objective to contribute for improvement of Ethiopian agricultural infrastructure and Teff production and strengthening Teff research in Ethiopia.[162] On 21 August 2003, Debre Zeit Agricultural Research Centre, part of EIAR, sold 1,440 kg (120 kg of each 12 specified Teff varieties) to Larenstein University for research and development purposes as per article 7 of the MoU.[163] However, in 2003, S&C filed patent application for production and processing of Teff in Europe.[164] When such information was gathered, Ethiopians wanted binding agreement on Teff in order not to lose European market due to the patent protection.[165] Then Teff agreement was signed between EBI

[158] Memorandum of Understanding on Research & Development of International Market for Teff based Products was signed among Ethiopian Agricultural Research Organization, Larenstein University, S&C Improvements on 26 March 2003 (MoU)

[159] Ibid, art 4 and 6

[160] Ibid, art 4.1

[161] Ibid, art 4.2 and 4.3

[162] Ibid, art 6

[163] Anderson (n7) 3

[164] Ibid 4

[165] Ibid

(provider), EIAR and HPFI B.V (user) on April 5, 2005.[166] The purpose of Teff agreement was to provide HPFI with access to specified Teff varieties to produce a wide range of specified food and beverage products which not traditional in Ethiopia.[167] And the company agreed to share various benefits (monetary and non-monetary) with Ethiopia.[168] However, HPFI did not comply with various provisions, *inter alia*, IP related provisions of Teff agreement. This chapter is devoted to discuss IP related provisions of Teff agreement in light of IPR protections granted in relation to Teff GR.

3.2. IPR protection and Teff GR

3.2.1. European Patent Convention[169]

The European patent system as it stands now is implemented by European Patent Organization (EPO), an executive body that administers European Patents on the basis of European Patent Convention (EPC).[170] The EPO operates on behalf of all EPC contracting States[171] and other States which have either extension or validation agreement with EPO.[172] Though the grant of European patent is mainly centralized; ownership, validity, and infringement of patent rights are largely determined by national laws of EPC member States.[173] If a patent is granted as a result of a European patent application, then the patent has the same effect in all contracting States for which it is granted, have the effect of and be subject to the same conditions as a national patent granted by that State.[174] EPC member countries maintain sovereignty over patent enforcement

[166] Teff agreement (n3)

[167] Ibid, art 4.1 and 4.2

[168] Ibid, art 8

[169] Convention on the Grant of European Patents, 1978 (EPC)

[170] Ibid, art 4(1)

[171] Ibid, art 1

[172] European Patent Organization, 'Extension/Validation system' (*EPO*, 1993) <https://www.epo.org/law-practice/legal-texts/extension-validation-system.html> accessed 18 November 2019

[173] EPC (n169), art 2(2) and 64(3)

[174] Michael La flame, 'The European Patent System: An Overview and Critique' [2010] 32(3) Houston Journal of International Law 613

since EPC established that patent rights must be administered and enforced in each designated country.[175]

3.3. European patent on Teff

The patent application on processing of Teff flour was first filed in the Netherlands by S&C Improvement BV on July 22, 2003.[176] The international filing date and the date of filing under EPO were given as 22 July 2004 and the Teff flour processing patent granted by EPO was on 10 January 2007 (Teff patent).[177] And as per article 64(1) of the EPC, the patent would expire after 20 years from its application, i.e. by 2024. The proprietor of the Teff patent is stated as HPFI B.V. in the European Patent Specification published by EPO, whereas in the International Application published under the Patent Cooperation Treaty by the WIPO the equivalent applicant (for all countries except USA) is given as S&C B.V.[178] The Teff patent covers a combination of 29 process and product claims.[179]

3.3.1. Novelty

3.3.1.1. Storage of Teff grain

The novelty requirement under Article 52(1) of EPC states that the invention must be new and it does not form part of the state of prior art. State of the art means *"everything made available to the public by means of a written or oral description, by use, or in any other way, before the date of filing of the European patent application"*.[180] This means, there is no qualification on the mode of prior art evidence (written or oral) in which the technical information was made available to the public.

[175] Ibid

[176] Teff patent (n8)

[177] Ibid

[178] Anderson (n7) 50

[179] Teff patent (n8)

[180] EPC (n169), art 54(2)

In Teff patent, HPFI claimed that storing of Teff grain after ripening for a duration of 4-8 weeks and grinding it amounts to good baking quality of Teff flour.[181] However storing Teff grain after harvesting has already been made available to the public before the patent application.[182] Farmers are aware that storing Teff for longer time give high economic benefits and flour quality.[183] Due to its nature, Teff can't be seriously damaged by common storage pests, and the longer time Teff is stored the higher its values.[184] In connection with this, the inventor of Teff patent also explains that he worked with Ethiopian farmers and this fact by itself justifies that the inventor learned variety of knowledge about post-harvest processing and storage of Teff that existed for centuries.[185] Therefore, it can be argued that the inventor used post-harvest and storage processes of Ethiopian farmers that existed before the application of the patent which defeats the novelty requirement.

3.3.1.2. Falling numbers of Teff grain

The falling numbers of Teff flour is another invention claimed by Teff patent.[186] According to the patent description, traditional Teff flour (Teff mixed with wheat flour to prepare *injera*) frequently leads to problems of instability of the product and unattractive taste.[187] Furthermore, traditional Teff flour has either too low or too high falling numbers that makes it unsuitable for baking quality.[188] And in order to solve such unattractiveness, instability and low baking quality of Teff flour, HPFI claimed that it invents falling number ranges from 250-380 second.[189]

Falling number is an international standard of sprout measurement with the full name 'Hagberg Falling Number' which is widely used by the baking industry to indicate flour quality of wheat

[181] Teff patent (n8) 16

[182] Seyfu Ketema, Tef Eragrostis tef (Zucc) Trotter Promoting the conservation and use of underutilized and neglected crops (1 edn, IPGRI 1997) 17

[183] Andersen (7) 131

[184] Ketema (n182)

[185] Andersen (n7) 109

[186] Teff patent (n8) 16

[187] Ibid 2

[188] Ibid 3

[189] Teff patent (n8) 2

and other cereals.[190] It indicates the alpha-amylase activity in the flour.[191] A high fall number means a low alpha-amylase activity and it means that the flour is less degraded by enzymes.[192] It is measured by heating the flour in water and measuring the rate of fall of a plunger.[193] As sprouted grain produces enzymes that break down starch, the ball will fall more quickly if the starch content is low, and this result in a lower falling number.[194] And in 2001 it is disclosed to the public that the usual commercial minimum for making bread is 250 Hagberg fall number.[195] Therefore, it is not novel to describe a falling number range for baking of Teff product as such information is part of prior art.[196]

Moreover, the test of 22 Ethiopian Teff varieties revealed that their falling numbers varied from 273-400 seconds.[197] And such range of falling numbers is presumed to be the inherent genetic quality of Teff GR and not as such creative solution for the problems mentioned by the inventor.

The Hague Court in its decision between *Ancientgrain BV vs Bakels Senior NV* regarding two Dutch patents, NL 1023977 (*processing post-matured Teff flour*) and NL 1023978 (*Flour mixture comprising Teff flour*), conclude that the falling numbers mentioned by the patents are no longer an invention since S&C circulated Teff message to growers of Teff before its patent application.[198] Teff message mentions:

> *"Dutch Teff flour has too low falling numbers; a Teff flour from US has too high fall numbers; a mixture of two ingredients baked well; the falling numbers is a value that*

[190] Sarah Best and Robert Muller, 'Use of the Hagberg Falling Number Apparatus to Determine Malt and Barley Quality' [1999] 77(1) Journal of Institutional Brewery 273

[191] Farm-direct, 'Wheat-characteristics and uses' (*Modern Wheat*, 2001) <http://www.farm-direct.co.uk/farming/stockcrop/wheat/wheatcurr.html> accessed 4 September 2019

[192] Ibid

[193] Ibid

[194] Anderson (n7) 52

[195] Farm-direct (n191)

[196] Ibid

[197] Andersen (n7) 52

[198] *Ancientgrain BV vs Bakels Senior NV* [2018] ECLI: NL: RBDHA: 2018: 13960 (District Court of the Hague)

indicates the quality of the starch (i.e. whether the flour can be used and baked); the Dutch Teff grain matures, giving it more favorable (higher) fall number"[199]

And from this message, a person skilled in the art can understand that flour with low falling number must be mixed with a flour with high falling numbers in order to get good baking quality and that the Dutch Teff grain ripens.[200] In other words, the mixture of too high and too low fall numbers of Teff flour will give a fall numbers of medium or good baking quality flour.[201] Since, Teff message reveals this information and it was communicated before the patent application, it is considered that such information belongs to prior art so that the claimed invention lack novelty. Therefore, the inherent genetic quality of Teff grain coupled with the information revealed by Teff message implies that the patent lacks novelty.

3.3.1.3. Grinding of Teff grain

The other invention claimed by Teff patent is the grinding of Teff grain. The patent states that in order to get fine flour, it must pass through a sieve with a maximum pore size of at least 150 and at most 100 microns.[202] Description of Teff patent mentioned that traditional Teff flour is usually not ground fine enough for baking quality because traditional Teff flour is obtained by grinding the grain directly after harvest and this causes problem with the processing thereof in baked products.[203] In order to solve such problem and get fine flour, the grain must be stored at least 4 and at tmost 8 weeks after harvesting and grinding in order to gain good baking quality of flour.[204] Additionally; traditional Teff flour is not usually ground fine enough and in order to get fine flour, the grinding of the Teff grain can be done according to conventional standard procedures for the preparation of flour using preferably pin-mill with integrated cooling.[205] Such description of invention with regard to grinding of Teff grain is not novel due to the fact that most of Ethiopian Teff varieties have the ability to produce Teff flour with a margin of 250-380

[199] Ibid

[200] Ibid

[201] Ibid

[202] Teff patent (n8) 16

[203] Ibid 3

[204] Ibid

[205] Ibid

falling numbers.[206] Moreover, traditional storage of Teff grain for longer time will give finer flour for baking products.[207] Therefore, patent claim with regard to grinding of Teff grain via conventional standard or pin-mill does not amount to any new invention on Teff flour and the resultant product since the invention is a matter of public knowledge and natural behavior of the Teff grain.

3.3.2. Non-obviousness

The other requirement under Article 52(1) of the EPC is an inventive step. As per article 56 of EPC:

> "*An invention shall be considered as involving an inventive step if, having regard to the state of the art, it is not obvious to a person skilled in the art."*

The issue of an inventive step will only arise when the invention is new.[208] The word '*obvious'* means an invention that follows plainly or logically from the prior art (written or otherwise evidence) or that does not go beyond the normal progress of technology.[209] Also, it is something which does not involve the exercise of any skill or ability beyond that to be expected of the person skilled in the art.[210] If the claim of invention before the filing date is something obvious to the person skilled in the art, then the claim is deficient of inventiveness.[211]

The claimed inventions of Teff patent are allegedly obvious to skilled person in the respective art (post-harvest Teff process). Storing of Teff is evidenced by various prior art documents mentioned above and the inventive step followed in the falling numbers and fine dough was already known fact over Ethiopian Teff varieties.[212] It is a common knowledge that Teff grain is preferred to consume after being stored for longer period and only in rare case that it could be

[206] Andersen (n7) 52

[207] Ketema (n182)

[208] European patent organization, 'Inventive step: General' (*Guideline for Examination*, 10 September 2019) <https://www.epo.org/law-practice/legal-texts/html/guidelines/e/g_vii_1.htm> accessed 10 September 2019

[209] Ibid

[210] Ibid

[211] Ibid

[212] Andersen (n7) 52

used immediately after harvest.[213] Description of Teff patent wrongly mentioned that *injera* is usually made from a mixture of Teff and wheat flour.[214] However, *injera* is widely and popularly prepared from unmixed Teff, whereas, the next popular *injera* is made from mixing Teff flour with the flour of other cereals such as barley, wheat, maize or sorghum.[215]

Since preparation of *injera* with Teff flour is old traditional practice in Ethiopia, the Court states that exclusion of *injera* from the patent claim was done deliberately so as to delineate the state of the art from the invention claimed.[216] And, it is clear from the context that Teff Message refers to the baking qualities of Teff flour for baking products other than *injera.*[217]

With regard to the preferred range of falling numbers, the court states that, skilled person who has read Teff message without inventive work has to get the claimed range by repeated baking test.[218] After all, it was known that the falling numbers which is expressed in seconds can vary between 61 and 600s.[219] The skilled person in the art can easily deduce the fall numbers of Teff flour from the US is high as per the Teff message.[220] Whereas, the fall numbers of Dutch Teff flour was not yet available at that time, however, the Teff message discloses Dutch Teff flour fall number is too low, and to obtain good quality you mix both US and Dutch flours.[221] Therefore, the court concludes that, skilled person in the art can infer from the two extremes (61 and 600s) that you have to sit in the middle to get good baking quality and it is not an inventiveness to arrive at the claimed broad range (280-420s) in that search.[222] And baking method for product and mixture of Teff flour from another flour and moisture with any leavening agent, kneading

[213] Ketema (n182)

[214] Teff patent (n8) 2

[215] Ketema (n182)

[216] *Ancientgrain* (n198)

[217] Ibid

[218] Ibid

[219] Teff patent (n8) 3

[220] *Ancientgrain* (n198)

[221] Ibid

[222] Ibid

[222] Teff patent (n8) 3

and heating the dough, is very common baking method of general professional knowledge.[223] Mixing Teff flour from a flour of another crop cannot manifest inventive step because it is part of general professional knowledge.[224]

3.3.3. Usefulness

Industrial application is another condition of article 52(1) of EPC. In order to fulfil this condition, any invention can be used in any industry of physical activity of technical character.[225] This may include various industries, including agriculture and food industries. Processes and product patent granted on Teff can be applied in area of food production and fulfils this requirement.

In light of Teff agreement, HPFI violates its obligation to communicate and get permission from the Institute for any innovative research proposals that has an effect to TK associated with Teff.[226] This is necessary in order to sort out possible confusion created between the research proposal and Ethiopian TK.[227] However, HPFI never produced any research proposal to the Institute before it files its patent applications.[228] Moreover, HPFI obliged not to access TK associated with Teff without explicit written consent granted by the Institute.[229] However, HPFI granted Teff patent in violation of article 4.5 and 4.6 of Teff agreement.

Though Teff patent is still active in United Kingdom, Italy, Belgium and Austria,[230] we can infer that the patent is not worthy of protection since it may not fulfill novelty and inventiveness of

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[223] Alemayehu Refera, 'Tef Post-Harvest Operation' (*FAO*, 14 May 2001) <http://www.fao.org/fileadmin/user_upload/inpho/docs/Post_Harvest_Compendium_-_TEF.pdf> accessed 10 October 2019 p.37

[224] Ketema (n182)

[225] EPC (n169), art 57

[226] Teff agreement (n3), art 4.6

[227] Ibid

[228] Interview with Ashenafi Ayenew, Director of Genetic Resource Access and Benefit Sharing Directorate, EBI (Addis Ababa, Ethiopia, 26 July 2020)

[229] Teff agreement (n3), art 4.5

[230] Amy Sandys, 'Heuking attempts to revoke teff flour patent' (*Juve Patents*, 21 May 2019) <https://www.juve-patent.com/news-and-stories/cases/heuking-attempts-to-revoke-teff-flour-patent/> accessed 21 November 2019

claimed invention. And there is possible evidence that can be adduced to nullify Teff patent in each jurisdiction that the patent is still active.

3.4. PBR and Teff varieties

The application for PBR was primarily made by S&C and EARO in June 2004.[231] In December 2004, the same application was made by company Stichting SCEAR in continuation of the first application.[232] This later company in its application mentioned Mekelle (*Tesfaya* and *Adina*) and Addis Ababa (*Ayana*) cities as origin of the varieties; and EIAR (formerly EARO) as provider of Teff seeds for the development of its varieties.[233]

On 21 April 2008, SCEAR has been granted PBR by Community Plant Variety Office (CPVO) for Teff varieties denominated as *Tesfaya*, *Ayana* and *Adina*.[234] This PBR protection is applied on member countries of Community Plant Variety Convention (CPVC).[235] Then one can ask if CPVC requires disclosure of origin of GR, PIC and MAT for PBR application. As per article 50(1) (g) this law, PBR applications must contain, *inter alia*, geographical origin of the variety which is sought for protection. Such disclosure requirement is not disclosure of origin of the seed or species that is used for breeding of the variety in question. But it is rather disclosure of geographical origin of the variety itself.[236] However, the company voluntarily discloses origin of Teff GRs that is used for the development of three Teff varieties.[237]

At the conclusion of Teff agreement, there was no ABS legal framework and the only laws that govern GR were found on a Proclamation that establishes IBCR. As per this law, EBI has the authority to *'give permit to those who need to collect, dispatch, import or export any biological specimen or sample'.*[238] Then one may ask whether the 120 kg of each of the 12 specified Teff

[231] Mirete (n9) 139

[232] Ibid 140

[233] Ibid 141

[234] Ibid

[235] Council Regulation (EC) 2100/94 Community plant variety rights [1994] 0J L 227/1(CPVC)

[236] Ibid, art 50(1)(g)

[237] Mirete (n9) 141

[238] IBCR (n105)

varieties exported to the Netherlands can be considered as biological samples. Though the law doesn't provide the exact amount or quantity of seed to be taken as a sample, it is hard to consider that such amount of seeds as a sample. In any case, the seed samples were exported and used for the development of new varieties of Teff. However, the 2006 ABS Proclamation tries to capture and regulate ABS contracts concluded before the entry into force of it through the inclusion of transitory provision. Article 33 of ABS Proclamation states:

> *'1) Access agreements made prior to the coming into force of this Proclamation shall be revised and harmonized with the provisions of this Proclamation.*
>
> *2) The access to genetic resources under agreements concluded prior to the coming into force of this Proclamation shall be suspended until they are revised and harmonized with the provisions of this Proclamation'.*[239]

This provision is designed to suspend ABS agreement concluded before the enactment of the law and to make them compatible with the provisions of ABS Proclamation. Since, it is concluded before the enactment of this law, Teff agreement is relevant agreement to be regulated by this provision. As discussed under section 2.5.2 of this thesis, an access permit holder is obliged to negotiate new ABS agreement whenever he/she/it wants to seek IPR (in this case, PBR) protection on the GR he/she/it accessed.[240] In the case of Teff agreement, S&C/HPFI and SCEAR who hold patent and PBR right on three Teff varieties had never shown up to negotiate new ABS agreement so far. Therefore, it can be concluded that article 17(12) of ABS Proclamation is violated.

Furthermore, article 6 of Teff agreement obliges HPFI to secure written consent from the Institute before it transfers Teff GR to third parties.[241] And, article 5.2 of Teff agreement stipulates that new varieties of Teff developed by the company must be jointly owned by EIAR and HPFI. Nevertheless, HPFI/S&C transfer the Teff seed samples to the company SCEAR

[239] ABS Proclamation (n108), art 33

[240] Ibid, art 17(12)

[241] Teff agreement (n3), art 6

without EBI consent.[242] Similarly, the three Teff varieties are owned by SCEAR solely. As a result, article 6 and 5.2 of Teff agreement are violated.

Generally the recognition of sovereign right of States to regulate their GR on the basis of their domestic law by the CBD in conjunction with violation of ABS requirements (ABS Proclamation and Teff agreement) would give an opportunity for Ethiopia to proceed with the case for the realization of some benefits from the use of Teff GR.

[242] Andersen (n7) 118

CHAPTER FOUR

DUTCH BANKRUPTCY AND ETHIOPIAN CLAIMS

4.1. Dutch bankruptcy legal framework

The Netherlands bankruptcy is mainly laid down in the DBA which contains substantive and procedural laws regarding bankruptcy.[243] Bankruptcy can be understood as a general lawful seizure of debtor's asset followed by declaration of bankruptcy.[244] Its major aim is to attach and liquidate all assets of the debtor for the benefit of creditors ordered by court.[245] It alters neither the validity nor content of the agreement to which the debtor is a party. However, the curator is not obliged to perform the agreement.[246]

A petition for bankruptcy has to be filed in the district court of the residence of the debtor and in case of a company, where it has its official seat or as mentioned in the articles of association.[247] Both the debtor and creditor and Dutch public prosecutor on the basis of public order can petition for the bankruptcy of the debtor.[248] It is essential for a petitioner to state facts and circumstances that establish the debtor has ceased to pay its due debts.[249] If the petitioner is a creditor, in addition to the *prima facie* case that the debtor has ceased to pay its debts, the court will have to ensure that the creditor petitioner has a right to claim against the debtor.[250] The bankruptcy

[243] Dutch Bankruptcy Act (1893, amended in 2003) (DBA)

[244] Lukas P Kourtmann and Vera G M Leferink, ' Netherlands' in Donald S Bernstein (eds), *The Insolvency Review* (7th, Law Business Research Ltd, London 2019) 256

[245] Efraim Asa Nainggolan, 'A Comparative of Indonesian Bankruptcy Law and the Netherlands Bankruptcy Law on the Conditions of Bankruptcy Petition from the Perspective of the Protection of Debtor's Legal Interest'(Master's thesis, Tilburg University 2013) 19

[246] Kourtmann (n244) 232

[247] DBA (n243), art 2(1)

[248] Ibid, art 1

[249] Ibid, art 6(3)

[250] Ibid

declaration implies the beginning of bankruptcy proceedings and as a result the court decides to appoint the supervisory judge (*Rechter-Commissaris*) and curator.[251]

4.2. Administration of Dutch bankruptcy

The main task of the curator is to administer and liquidate the bankruptcy estate as per the supervision of supervisory judge who has a role and duty to oversee the administration and liquidation of the bankruptcy estate.[252] He notifies all known creditors to submit their claim against the bankruptcy with supporting evidences for verification.[253] Claims having an indeterminate or uncertain value or whose value is not expressed in Dutch currency or not expressed in money at all shall be admitted for their estimated value in Dutch currency.[254] Prior to a claims validation meeting, the curator will make a list of the claims he either provisionally admits or challenges.[255]

4.3. Ethiopian bankruptcy claim and their validity

Ethiopia sent a letter with its bankruptcy claims in connection with the Teff agreement to the curator of bankruptcy of HPFI.[256] In this letter, monetary and non-monetary benefits are claimed from HPFI for its breaches of multiple obligations of Teff agreement. Since Teff agreement was entered by HPFI before its declaration of bankruptcy it could be categorized as an ordinary claim.[257] Such kind of claims comes into existence before the start of the bankruptcy or directly results from an agreement the debtor has entered into before the declaration of bankruptcy.[258] And creditors of such claims share proportionally the amount of the net-proceeds that result from

[251] Ibid, art 14

[252] Ibid, art 64 and 68

[253] Ibid, art 109

[254] Ibid, art 133

[255] Ibid, art 112

[256] Bankruptcy claims (12)

[257] DBA (n243), art 37a

[258] Ibid

the liquidation of estate after secured creditors (mortgagees and pledgees)[259] and all preferential claims (Dutch tax authorities, wage claims and labor claims) have been paid in full.[260] These claims also need to be filed for verification with the curator.[261] And the following discussion tries to analyze the validity of Ethiopian claims as per the Teff agreement and applicable laws.

4.3.1. Non-monetary claims

4.3.1.1. Use Teff GR[262]

On the basis of article 12.5 of Teff agreement, Ethiopia demands automatic stoppage of use of Teff GR by HPFI and Ecosem, a company established by the same directors of HPFI.[263] Of course HPFI has an obligation to stop using Teff GR if the agreement is terminated and the demand in this regard could be valid. The incidental question may be, is it possible to prohibit use of Teff GR by Ecosem on the basis of Teff agreement? From the basics of contract law, it is not possible to regulate conducts of Ecosem on the basis of Teff agreement. This is because first, Ecosem has separate legal personality from that of HPFI and it cannot be regulated by Teff agreement. Second, Teff agreement lacks a provision which states that any subsequent transfer of Teff GR by the parties will be governed by the same agreement. The only obligation mentioned under Teff agreement is prohibition of third party transfer of Teff GR/its components but not use of Teff GR by third parties who received it from HPFI. Therefore, the stoppage of use of Teff GR by Ecosem on the basis of Teff agreement was not validly claimed even though its directors are the same with HPFI.

4.3.1.2. Withdrawal of patent and termination of PBR on Teff GR[264]

The demand of withdrawal of Teff patent based its reason that HPFI used Ethiopian TK associated with Teff GR and this violates article 4.5 of Teff agreement. There is ample evidence

[259] Ibid, art 57

[260] Reinout Vriesendorp and Ferdinand Hengst, ' Netherlands' in Sam Friend (eds), The International Comparative Legal Guide to: Corporate Recovery & Insolvency (11th, Global Legal Group Ltd., United Kingdom 2017) 142-143

[261] DBA (n243), art 110

[262] Bankruptcy claim (n12) 1

[263] Ibid

[264] Ibid 2-3

that HPFI used TK of Ethiopia for its patent without the consent of the Institute (see section 3.3 of this thesis). However, the bankruptcy claim regarding the withdrawal of the Teff patent may not be validly claimed due to the fact that such demand may only be claimed from the entity that grants such IP protection (domestic jurisdiction that the Teff patent is still active) and not from HPFI who sold it a year before its bankruptcy declaration.[265]

Similarly, Ethiopia demands the termination of PBR granted on three Teff varieties. Ethiopia claimed such termination due to the fact that those protected Teff varieties were used Ethiopian Teff seeds for their development. And according to Teff agreement, EIAR (formerly EARO) should be joint owner of such PBR since it provides the Teff seeds.[266] However, the right holder of such protected Teff varieties is Stichting SCEAR, who is another company distinct from HPFI. Further, CPVC stipulates limited grounds to terminate the right already granted.[267] Therefore, demand of withdrawal of Teff patent and termination of PBR right granted on three teff varieties could not be considered as valid claims on the basis of Teff agreement and CPVC.

4.3.1.3. Return of Teff Seed samples[268]

Bankruptcy claim that demands the return of Teff seed samples is not designed as per the terms of Teff agreement. The only obligation that HPFI had is not to use Teff GR when Teff agreement is terminated but not return of the Teff seeds to EIAR.[269] Consequently, HPFI may not be obliged to return the Teff seed samples accessed as per the Teff agreement. Therefore, such kinds of claim could not be valid bankruptcy claim as per Teff agreement itself.

[265] Anderson (n7) 115

[266] Bankruptcy claim (n12) 2-3

[267] CPVC (n235), art 7-10 and 21

[268] Bankruptcy claim (n12) 2

[269] Teff agreement (n3), art 12.5

4.3.2. Monetary claims

4.4.2.1. Monetary benefit sharing[270]

Teff agreement stipulates four types of monetary benefits. They are lump sum payment; royalty payment from the sale of basic and certified Teff seeds; license fee from the sowing of Teff varieties and monetary contribution for the establishment of Financial Resource Support for Teff (FiRST fund).[271]

A lump sum payment is due by 2010 but the company by then declared bankrupt without this payment.[272] Annual royalties for certified seeds and license fees have never been paid.[273] FiRST fund was not set up and no payment was made with its minimum sum of 20,000 Euros.[274] However, HPFI paid 4000 Euro to the Institute but it was not clarified that to which obligation this payment made for.[275]

In addition, failure to pay financial obligation stated under article 8 is penalized by additional payment as per article 11.4 of Teff agreement.[276] Article 11.4 mentioned that if the company fails to fulfil its financial obligation as per article 8 of Teff agreement, it is obliged to pay additional penalty payment for each day of delay. Therefore, penalty and additional payment demanded in this article can be validly claimed on the basis of Teff agreement and DBA.

4.3.2.2. Penalty payment for breach of Teff agreement[277]

According to Ethiopian claim, HPFI is obliged to pay a sum of money provided under article 11 of the agreement upon violation of its commitment. The allegedly violated articles are: 4.2, 4.3,

[270] Bankruptcy claim (n12) 2

[271] Teff agreement (n3), art 8.1-8.4

[272] Anderson (n7) 101

[273] Ibid

[274] Ibid

[275] Ibid

[276] Bankruptcy claim (n12) 3

[277] Ibid

4.5, 4.6, 4.9, 51, 5.3 and 6.[278] Let's discuss each of the obligations that are allegedly violated by HPFI.

Article 4.2 of the agreement states that *'the company is permitted to use Teff GR for the purpose of developing non-traditional Teff based food and beverage products that are listed in Annex 3 of this agreement'.* And article 4.3 states that *'the company cannot use Teff for any other purpose (e.g. chemical and pharmaceutical) whatsoever unless explicit written consent is given by the provider'.* On the basis of these provisions the company is prohibited to use Teff GR for the purpose other than non-traditional Teff based food/beverages. The question then, doe the company utilize Teff GR for the purpose other than stated in the agreement? If yes, does the company secure permit for such utilization? In order to answer these questions, reviewing Teff patent will give some clues. If you see the Teff patent it claims: *'[…] binding a composition preferably a pharmaceutical or cosmetic composition […]'*.[279] Furthermore, the description of Teff patent states: '[…] *binding agent in a pharmaceutical composition such as a tablet, a capsule or coated tablet'*.[280] From these two parts of the Teff patent, it is evident that HPFI uses Teff GR for the purpose other than specified by the agreement, i.e. for pharmaceutical and cosmetic (coating) purpose. However, in doing this, HPFI did not get any permission from the Institute and this amount to violation of the above mentioned two articles. Therefore, the demand of penalty payment on the basis of violation of these articles can be considerer as valid claim.

Article 4.5 and 4.6 of Teff agreement states about the use of TK associated with Teff GR without the consent of the Institute. However, HPFI did not produce any research document to the Institute which can be related to the invention what it claims and granted Teff patent that uses Ethiopian TK on Teff GR (see section 3.3 of this thesis). So, demand of payment of penalty sum mentioned under article 11.1 is valid on the basis of violation of these articles.

Article 4.7 and 4.8 are other articles that are allegedly violated by HPFI. Article 4.7 of Teff agreement states that:

[278] Ibid

[279] Teff patent (n8) 17

[280] Ibid 6

> *'The company acknowledges that the GR of Teff it has acquired or will acquire, irrespective of the source, is of Ethiopian origin and thus belongs to Ethiopia. It agrees to respect this fact'.*

This article must be read in conjunction with article 8.11 which states:

> *'The company shall acknowledge, in all its publications and applications for the registration of Teff varieties and other IPR over products it will develop from Teff, that Ethiopia is the country of origin of that Teff'.*

These two provisions obliged HPFI to acknowledge Ethiopia as the origin of Teff GR in all its publications and IPR applications irrespective of the source it acquired or will acquire. One question will be triggered, is it legal to oblige HPFI to acknowledge Ethiopia as a country of origin irrespective of the source it collects Teff GR? Country of origin of a GR cannot be decided by mere contractual obligation, rather through scientific method.[281] If the GR collected in different *in situ* conditions (in their natural habitat or ecosystem), it could be considered that such GR collected from country of origin.[282] Meanwhile, at the time of drafting Teff agreement, the drafters are fully aware that Teff GR is already available in foreign jurisdiction through different means including the MoU that entered between S&C and EIAR in 2003. And they tried to incorporate such facts in the Teff agreement through the disclosure of origin. Nonetheless, its enforceability may not be through the contractual arrangement; and natural factor is the basic to identify country of origin of a given GR.

Whether or not the company acknowledges Ethiopia as a country of origin of Teff GR for all publications and IPR applications is another issue. To some extent, the company acknowledges Ethiopia (*Mekele and Addis Ababa*) as a country of origin for the three Teff varieties.[283] In relation to its patent application and other publications; the researcher couldn't find that whether the company discloses Ethiopia as an origin of Teff GR. If the company failed to acknowledge in these documents that Teff GR is originated in Ethiopia, the demand of penalty payment in

[281] Greiber (n64) 18

[282] ABS Proclamation (n108), art 2(7)

[283] Nega Mirete (n9) 141

connection of these articles could be valid since the company states such fact only in its PBR application but not in other documents.

Article 4.9 of Teff agreement states that HPFI has an obligation to *assist* in identifying and bringing to the court infringers of *Ethiopian right over Teff GR*.[284] Let alone assisting in identifying and bringing infringers of Ethiopian rights over Teff GR, the company itself take part in the infringement of ownership of Ethiopia rights by transferring the seed samples to third party in violation of article 6 of Teff agreement. If the case of PBR on Teff varieties discussed under section 3.4 of this thesis is taken, the company transfer Teff seeds to Ecosem and SCEAR (develops three Teff varieties that are taken from Ethiopia). And these companies utilized the seeds for their purpose without sharing benefit to the provider of Teff GR, Ethiopia.[285] Therefore, bankruptcy demand in cases of violations of article 4.9 and 6 of Teff agreement can be accepted as valid claim.

Violations of obligations mentioned under article 5.1 of Teff agreement are also claimed by Ethiopia.[286] In this article the company is prohibited to claim IPR over Teff GR/its components.[287] As far as the knowledge of the author of this thesis is concerned, there is no IPR granted on Teff GR or its components. So, there is no ground to request payment of penalty on the basis of this provision. However, article 5.2 mentioned that new varieties of Teff developed by the company shall be jointly owned. But HPFI and its affiliated companies used Teff GR for the development of three protected Teff Varieties solely.[288] And this amounts to outright violation of this article which deserves penalty claim in this regard. Article 5.3 obliges a company to assist the registration of Teff varieties not developed by the company outside Ethiopia via financing where the company has adequate finance in the budget year. In this regard, the researcher couldn't find Ethiopia's effort to register Teff varieties outside Ethiopia. Therefore, it's hard to conclude that article 5.3 of Teff agreement is violated.

[284] Bankruptcy claim (n12) 3

[285] Andersen (n7) 118

[286] Bankruptcy claim (n12) 3

[287] Teff agreement (n3), art 5.1

[288] Nega Mirete (n9) 141

The final bankruptcy claim is violation of reporting obligation stipulated under article 16.1. This article obliges HPFI to submit annual research and financial reports. In this regard, the company only submits 2006 annual report to the Institute in Dutch language.[289] However, it did not submit annual research and financial report of the year preceding its declaration of bankruptcy (2007 and 2008).[290] Therefore, demand of penalty payment for failure to submit timely financial and research report by the company amounts to valid bankruptcy claim.

4.4. Ethiopian Claims and DBA

On the basis of the DBA, the curator has only the power to administer and preserve the estate of the bankrupt debtor and has no any regulatory power to decide on third parties.[291] In relation to Ethiopian demand for withdrawal of Teff patent, termination of PBR on three Teff varieties and return of Teff seed samples may not be accepted as valid claim. This is because the law does not authorize the curator to invalidate or withdraw IPRs of the bankrupt HPFI since such kinds of rights are regulated by separate legal regime (patent and PBR laws). Therefore, Ethiopian claim regarding the withdrawal of patent right and benefit sharing from PBR of Teff varieties may not be accepted as a bankruptcy claim by the curator.

All claims against Dutch bankruptcy will be made in financial terms.[292] If the claims have indeterminate or uncertain value or whose value is not expressed in financial terms, shall be admitted for their estimated value in Dutch currency.[293] Claims with periodic payment shall be admitted for their estimated value at the date of declaration of bankruptcy.[294] Ethiopia could not file her financial claim (monetary benefit, penalty and additional penalty) in monetary terms due to lack of financial report submitted by HPFI.[295] However, such claims can be categorized as

[289] Andersen (n7) 103

[290] Ibid

[291] DBA (n243), art 68

[292] Ibid, art 133

[293] Ibid, art 133

[294] Ibid, art 131

[295] Bankruptcy claim (n12) 4

claims that are indeterminate or uncertain value and the curator may accept their estimated value in Dutch currency.[296] Till now, no payment has been made to Ethiopia yet.[297]

4.5. Guarantee of Teff agreement

The functionality challenge of any ABS agreement lies in the basic fact of formal enforcement of contract (in courts and arbitration) of international contracts (one of the parties or the object of contract found in more than one jurisdiction) is so cumbersome and expensive for providers.[298] Usually, parties to ABS agreement may not always rely on formal enforcement of their respective obligation and find another means to secure their transaction.[299] And contractual remedies that can be enforced without formal enforcement procedures.[300] Among various contractual remedies, specified sum of money as a guarantee of contract and penalty/liquidated damage clauses can serve as security to the transaction concluded.[301]

When we see Teff agreement in light of this concept, it tries to include two different types of penalties. These are penalties regarding non-monetary obligation (article 11.3) and monetary obligation (article 11.4) as discussed in section 4.3 of this thesis. Due to insufficiency of penalty clauses, Teff agreement incorporates separate clause that intended to guarantee the performance of it.[302] Article 14 of Teff agreement states that: *'Each year, the company shall pay sufficient sum of money in advance from which the request by the provider for payment will be subtracted'*

The intention behind incorporating this provision was that if the company failed to comply with the provisions of Teff agreement, the Institute can easily subtract that sum of money from the already deposited. First of all, this provision is not clear as to the meaning of phrase '*sufficient sum'*. It is also unclear that who interprets the sufficiency of amount that is intended to be

[296] DBA (n243), art 110-113

[297] Ayenew (n228)

[298] Tomme Young and Morten Tvedt, Drafting Successful Access and Benefit-Sharing Contracts (1st edn, Koninklijke Brill NV 2017) 268

[299] Ibid

[300] Ibid

[301] Ibid

[302] Teff agreement (n3), art 14

deposited. Unless the exact figure of sum of money mentioned, it's difficult to interpret such vague phrase. In any case, there was no such deposited sum of money as upfront payment by the company.[303] This means, Teff agreement doesn't contain effective performance tool and mechanism to implement it. Therefore, it can be argued that Teff agreement does not contain sufficient guarantee for the performance of each of the obligations stipulated in it.

[303] Ayenew (n228)

CHAPTER FIVE

CONCLUSION AND RECOMMENDATION

5.1. CONCLUSION

The enforcement of ABS obligation is highly associated with various legal regimes and user country measures where compliance with ABS obligation will become a serious concern. This is evident especially in cases where there is no effective synergy and nexus between all applicable laws that can be useful for the effective realization of such obligation. Especially, patents and PBR laws play significant roles for the compliance of ABS obligations. To operationalize such supportive arrangement of IPR regime, the issue of DR in IP system has been proposed as a necessary condition to support the realization of objective of ABS. In this regard, the CBD and Bonn Guideline encourage but not oblige member countries to take measures regarding users in their jurisdiction to disclose the origin of GR/ATK in their application for IPR protection to track the use and compliance of ABS requirement. However, such measures are not effective to monitor the use of GR/ATK due to the fact that both instruments doesn't provide systematic and binding user country measures designed to track and monitor the use of GR/ATK. After extended debate between CBD parties, Nagoya Protocol was adopted and entered into force in 2010 and 2014, respectively. Nagoya Protocol is aimed to supplement the application of ABS thereby contribute to the conservation and sustainable use of biological resources.

Nagoya Protocol comes up with innovative provisions that are designed to track and monitor the application and compliance of the ABS requirements of provider countries. It is a binding international law that obliges member parties to take user country measures regarding the compliance of ABS requirements where users in their jurisdiction utilize provider country GR/ATK. Moreover, it provides a range of tools (issuance of permit) and mechanisms (designation of checkpoints) to monitor the use of GR/ATK. However, it fails to include mandatory DR at specific checkpoint(s) designated by member countries. Rather, it only obliges Parties to take measures that are 'effective', 'proportionate' and 'appropriate' to monitor the use of GR/ATK. Further, it leaves to define the meanings of terms such as 'effective',

‘proportionate’ and ‘appropriate’ measure. This makes its applicability and effectiveness unpredictable and subjective.

In relation to TRIPS, incorporation of DR proposal is still pending. Lack of DR in patents and PBR applications are epic problems raised by developing countries. This is because, these group of countries feels that lack of DR in international IP system particularly TRIPS pave the way for misappropriation of GR/ATK. And DR is proposed as an amendment for the TRIPS that support the enforcement of ABS obligations by preventing grant of erroneous patent. IP offices are better places to monitor the use of GR/ATK. Whereas, developed countries have the opinion that ABS and IP regimes are separate regimes with no conflict to one another. They argued that national mechanisms independent of patent law should be used to promote compliance with ABS obligations. And highlighting the importance of contract system and establishment of searchable databases to make relevant information easily accessible to patent examiners may prevent the misappropriation of GR/ATK and erroneous grant of patents by availing prior art and ABS information. However, some developed jurisdictions (e.g. EU) are willing to accept DR proposal as TRIPS amendment only where such requirements must not amount to rejection of IPR application or revocation of the granted patent (post-grant measures). As TRIPS stands now, inventions that uses GR/ATK may misappropriated easily since it doesn’t oblige member parties to request patent applicants to comply with DR. In any case such discussions are still ongoing under WTO TRIPS council.

Domestically, ABS Proclamation expressly provides that access permit holder has a duty to disclose the locality of GR that accessed where he/she/it wants IPR protection. Moreover, if the access permit holder wants to get IPR protection, the law obliges the conclusion of new ABS agreement with the Institute. However, the major defect of the law is that the access permit holder only obliged to disclose the origin of GR but not PIC and MAT. Further, the ABS law failed to provide sanction on failure/erroneous DR. IPR system particularly Patent Proclamation has failed to include DR in the application for patent that uses GR which have negative impact on the realization of ABS objectives. However, PBR Proclamation explicitly provide for DR as a condition for grant of PBR. In addition, PBR Proclamation specifies the type of consequences of failure/wrongful disclosure. So, PBR Proclamation is in a better position to support compliance with ABS obligation.

The IPR issues associated with Teff GR witnesses the apparent contradiction between IP system and ABS objective. Though the Teff agreement explicitly obliges the user to recognize Ethiopia as the origin of Teff GR in its application for patent application, it fails to do so as a result of lack of DR in a patent regime (for instance, EPC). If we see Teff patent, EPO grants such patent protection without adequate examination of prior art documents. For instance, there are literatures that describe the existence of prior art documents that contain information on post-harvest processing of Teff grain for good baking quality flour of Teff. Moreover, the existence of Teff message analyzed by the court that judges the validity of Dutch Teff patent can be considered as an additional evidence that defeat the novelty and inventiveness of the patent. This is because, the Teff message circulated before the application of Teff patent discloses that US Teff flour is too high and Dutch Teff flour is too low. And anyone could get good baking quality of Teff flour by mixing both of US and Dutch Teff flours. In connection with PBR on three Teff varities, the applicant (Stichting SCEAR) explicitly discloses Ethiopia (*Mekelle* and *Addis Ababa*) as a country of origin for the three Teff varieties it developed. In this regard the applicant was not granted PIC and established MAT with Ethiopia as per the CBD and ABS Proclamation. Thus, PBR rights granted on the three Teff varieties that used Teff GR without PIC and MAT can be challenged on the basis that the proprietor of such varieties has not fulfilled ABS requirements provided by the CBD and ABS Proclamation.

Admissibility of Ethiopian bankruptcy claim against HPFI particularly claims demanding withdrawal of patent and termination of PBR granted on Teff varieties may not be admitted by curator of HPFI bankruptcy since the curators don't have the authority to withdraw the granted IPR protections. Such a claim could be filed against the entity who grants such patent (domestic jurisdiction of EPO member countries that Teff patent is still active) and PVP (either ECPVO or domestic jurisdictions of member countries of CPVC that the PVP of three Teff varieties are still active). In this case, Teff patent Further, Ethiopia's demand of benefit sharing from another company called Stichting SCEAR which is not a party to Teff agreement that holds PBR on three Teff varieties (*Tesfaya, Adina and Ayana*) may not be valid from contract point of view since the contracting parties cannot make third parties liable to their contract unless there is a clause in the initial contract that governs subsequent transfer of GR.

5.2. RECOMMENDATION

5.2.1. Legal framework

5.2.1.1. ABS Proclamation

- It must include other elements of DR, PIC and MAT apart from disclosure of origin of GR as an obligation of access permit holder and provide sanctions for failure/erroneous DR.
- Designate checkpoint(s) to track and monitor the use of GR/ATK since it is also an international obligation for Ethiopia.
- Include precondition before granting access to GR, make sure that user country takes measure where users in its jurisdiction uses GR/ATK on the basis of ABS requirements of provider country.
- The law must prohibit granting of IPR protection on GR and parts thereof accessed.
- In order to improve provider's ability to monitor the use of GR, it must encourage users to establish local operations or oblige bioprospecting activities relating to GR/ATK accessed, which must be undertaken by local companies operated under provider jurisdiction.[304]

5.2.1.2. TRIPS Agreement and Patent Proclamation

- Include disclosure requirement as a condition for application for invention based on GR/ATK so as to support the implementation of ABS objectives.

5.2.2. Systemic, institutional and individual

- There must be documentation or database of TK associated with GR to preserve TK and prevent the grant of erroneous patent that uses GR/ATK of Ethiopia.
- There must be organizational structure/institutional cooperation that periodically review patent applications and database of major IP jurisdictions whenever there is an application

[304] Young (n298) 288

that uses Ethiopian GR/ATK so that Ethiopia can easily send prior art document or file opposition, if any, to invalidate the application in question.[305]

- Register farmer varieties in major IP jurisdictions to prevent misappropriation of GR.
- There must be a platform to exchange ABS and IP information(s) between relevant offices and appropriate international bodies to track unauthorized use of GR/ATK.
- Capacity building activities on drafting and negotiating ABS agreement must be available.

5.2.3. Contents on ABS contract

- Specify and include all involved parties (affiliated/related companies) with their role and obligation.
- Define important material terms and phrases of the contract.
- Regulate third party transfer of GR on the contract itself. This may ensure that obligations of the initial contract will not be lost whenever the GR transferred to third parties.
- IPR related provision of the contract should be drafted to accommodate all possible modes of IP protection. In this regard, Teff agreement only prohibits patents on GR and its components but not processes and derivatives (e.g. Teff flour).
- It must regulate all the information (i.e. digitized data) associated with the GR.
- As far as possible and practicable, it should contain joint inventorship and ownership clauses of IPR protection sought by access permit holder as a form of benefit sharing.
- It must incorporate technically/legally sound and enforceable guarantee clause.
- It must address that disclosure requirement as an obligation of access permit holder.
- It must include detailed and appropriate laws that can be applicable for the interpretation and application of the contract.
- It must contain detailed dispute settlement procedures and mechanisms.
- Advance/upfront payment or guarantee clause should be included in the agreement to ensure the performance of contract.
- It must contain language and mode/form of communication.

[305] Manuel Ruiz, Peru: seeking benefit sharing through a defensive approach-the experience of the National Commission for the Prevention of Biopiracy. in Manuel Ruiz and Ronnie Vernooy (eds), The Custodian of Biodiversity: Sharing Access to and Benefit of Genetic Resources (Earthscan 2012) 49

5.2.4. Impending legal action

From legal point of view, there is a good cause to challenge the Teff patent in European countries where the patent is still active (Italy, Austria and the United Kingdom).[306] As can be seen from chapter three of this thesis, there are relevant evidences that shows the existence of prior art document and obviousness of the patent claims (literatures and Teff messages circulated by the patent proprietor) that can defeat novelty and inventiveness of the invention. In relation to the three Teff varieties, the user itself declare that it accessed Teff seed samples from Ethiopia and this declaration could be used as adequate evidence for claiming benefit sharing from the company. Therefore, the Government of Ethiopia could start national nullity proceeding against the existing Teff patent in European countries where the patent is still active. Further, Ethiopia could also claim benefit sharing from the company that holds PBR on three Teff varieties.

[306] Sandys (n230)

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IX. Thesis

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- Efraim Asa Nainggolan, 'A Comparative of Indonesian Bankruptcy Law and the Netherlands Bankruptcy Law on the Conditions of Bankruptcy Petition from the Perspective of the Protection of Debtor's Legal Interest'(Master's thesis, Tilburg University 2013)

X. Communications and proposals

- Draft Decision to Enhance Mutual Supportiveness Between the TRIPS and CBD, communication from Brazil, China, Columbia, India, Indonesia, Peru, Thailand, the ACP and African Group, See WTO document TN/C/W/59 of 19 April 2011
- Communication from the United States, Views of the United States on the Relationship between the CBD and TRIPS, See WTO document IP/C/W/257 of 18 November 2005
- The Patent System and Genetic Resources, communication from Japan, See WTO document IP/C/W/472 of 13 June 2006 March
- Article 27.3(b), Relationship between TRIPS and CBD, and The Protection of Traditional Knowledge and Folklore, communication from the United States, see WTO document IP/C/W/469 OF 13 March 2006

- Review of Article 27.3(b) of the TRIPS, and the relationship between the TRIPS and CBD and the Protection of Traditional Knowledge and Folklore, communication from European Union, See WTO document IP/C/383 of 17 October 2002

XI. Interview

- Interview with Melesse Mario (PhD), Director Ethiopian Biodiversity Institute, EBI (Addis Ababa, Ethiopia 20 June, 2020)
- Interview with Fikre Tesfaye Hailemariam, Director of Patent Protection and Technology Transfer Directorate, EIPO (Addis Ababa, Ethiopia 23 July 2020)
- Interview with Medemdemiyaw Nekinikie, Senior Variety Release and Protection Expert, Ministry of Agriculture (Addis Ababa, Ethiopia 27 June, 2020)
- Interview with Ashenafi Ayenew, Director of Genetic Resource Access and Benefit Sharing Directorate, EBI (Addis Ababa, Ethiopia 16 July 2020)

Appendices

- **Annex I**

Teff agreement

- **Annex II**

Ethiopian bankruptcy claim

- **Annex III**

Draft new ABS Proclamation

- **Annex IV**

MoU of Teff

- **Annex V**

Teff Patent

Agreement on access to, and benefit sharing from, Teff genetic resources

Signed for the Provider

Date 05/04/05

Signed for the Company

Date 5 April 05

Signed for Embassy of The Netherlands as a witness

Date 05-04-05

Dr. Tewolde Berhan Gebre Egziabher as a witness

Date 5/5/2005

Addis Abeba
December 2004
Version 5 final

Institute of Biodiversity Conservation,
Ethiopian Agricultural Research Organization
Health and Performance Food International bv. (HPFI)

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2 Parties

This **agreement** is signed between:

The Institute of Biodiversity Conservation, whose address is Yeka Kifle Ketema, Kebele 08, P.O.Box 30726; telephone 251-1-627504/612244, fax: 251-1- 627730/613722; e-mail: ibcar@telecom.net.et or Biod@telecom.net.et, Addis Ababa, Ethiopia, hereafter referred to as the "**Provider**"

The Ethiopian Agricultural Research Organization, whose address is Bole Kifle Ketema, Kebele 12/13, P.O.Box 2003; Tel: 251-1-462270; fax: 251-1-461251; e-mail: dg@earo.org.et; Addis Ababa, Ethiopia, hereafter referred to as "**EARO**"

And

Health and Performance Food International bv. (HPFI), whose registered address is P.O. Box 427, Azieweg 4, 9407 TG Assen, NL-9400, the Netherlands, Tel: +31 (0) 6 53 413847, e.mail j.turkensteen@soilandcrop.com, hereafter referred to as the "**Company**".

3 Preamble

3.1 Whereas Teff (*Eragrostis tef)* is a crop species of Ethiopian origin and has various attributes of interest to the food industry.

3.2 Whereas the **Company** has come up with new applications of Teff and thus wants to have access to Teff varieties to be used for producing Teff-based food and beverage products and to develop new Teff varieties more suitable for producing such products.

3.3 Whereas the **Company** acknowledges that the genetic resources of Teff the **Company** has acquired or will acquire irrespective of the source are of Ethiopian origin and thus belongs to Ethiopia, and it agrees to respect this fact.

3.4 Whereas the **Provider** is a national institution in Ethiopia with the authority to grant and regulate access to genetic resources of Teff and other species and is responsible for effecting the sharing of the benefits from those genetic resources.

3.5 Whereas the **EARO** is a national research institution responsible for the coordination of national agricultural research on Teff in Ethiopia and has developed various Teff varieties.

3.6 Whereas Articles 1 and 15-19 of the 'Convention on Biological Diversity' and the 'Bonn guideline on access to genetic resources and fair and equitable sharing of the

benefits arising out of their utilization,' which "are a useful first step of an evolutionary process in the implementation of relevant provisions of the Convention", require that the benefits arising out of the utilization of genetic resources be shared fairly and equitably between the **Provider** and the **Company**; and whereas the access to genetic resources and the fair and equitable sharing of the benefits arising from the utilization thereof is to be determined by terms mutually agreed by the two parties.

3.7 Whereas the **Company** wants to use the genetic resources of Teff and is willing to share with the **Provider** the benefits arising out of the use; and whereas the **Provider** has consented to the use of the genetic resources of Teff by the **Company**.

3.8 Therefore, in witness thereof, the following **agreement** on access to Teff genetic resources and the fair and equitable sharing of the benefits arising from the access has been concluded by the two parties.

4 The scope of access

4.1 The **Provider** agrees that the **Company** accesses and uses the genetic resources of Teff specified in Annex 1 to this **agreement**.

4.2 Under this **agreement**, the **Company** is permitted to use the genetic resources of Teff only for the purpose of developing non-traditional Teff based food and beverage products that are listed in Annex 3 to this **agreement**.

4.3 The **Company** cannot use Teff for any other purposes (e.g. chemical, pharmaceutical etc.) whatsoever unless explicit written consent is given by the **Provider**.

4.4 The **Provider** shall not grant to other parties access to Teff genetic resources for the purpose of producing the products of the **Company** listed in Annex 3 of this **agreement** unless it secures the consent of the **Company**.

4.5 The **Company** is not permitted to access the traditional knowledge of Ethiopian communities on the conservation, cultivation and use of Teff. Therefore, the **Company** shall not claim any rights over, nor make commercial benefit out of, such traditional knowledge unless explicit written **agreement** is given to it by the **Provider**.

4.6 To avoid possible confusion between the traditional knowledge of Ethiopian local communities and inventions made by the **Company**, the **Provider** shall, upon submission by the **Company** of its research proposals, inform the **Company** of the

existing traditional knowledge of relevance to the research areas proposed by the **Company**.

4.7 The **Company** acknowledges that the genetic resources of Teff it has acquired or will acquire, irrespective of the source, is of Ethiopian origin and thus belongs to Ethiopia. It agrees to respect this fact.

4.8 Should there arise any claim challenging the origin or ownership of Teff, the **Provider** shall take the responsibility to defend the parties against that claim, and the **Company** shall assist the **Provider** in the defence.

4.9 The **Company** shall assist in identifying and bringing to court infringers upon the rights of Ethiopia over Teff.

5 Intellectual property ownership

5.1 The **Company** shall neither claim nor obtain intellectual property rights over the genetic resources of Teff or over any component of the genetic resources. However, plant variety protection may be obtained over Teff varieties.

5.2 The plant variety protection rights over new Teff varieties the **Company** will develop shall be co-owned by the **Company** and **EARO**. Such varieties shall be used by **EARO** and the **Company** in such a way as not to damage the business interests of the **Company** in so far as the products listed in Annex 3 or the interests of **EARO** or the **Provider** are concerned.

5.3 The Teff varieties that are not developed by the **Company** shall be owned by the **Provider** on behalf of the Teff farming local communities of Ethiopia. If it is found to be in the interest of the **Provider** or the **Company,** such varieties may be registered in the name of **EARO**. The **Company** shall handle and cover the cost of such registration outside of Ethiopia, provided that it has the finances in the given budget year.

6 Transfer to third parties

The **Company** shall not transfer Teff seed samples or any component of the genetic resources of Teff to third parties without first having explicit written consent from the **Provider**.

7 Effect of the agreement

7.1 The **agreement** shall not affect the sovereign rights of Ethiopia over the genetic resources of Teff and the **Provider** shall always retain the authority to grant other parties access to any genetic resources of Teff.

7.2 This **agreement** shall not affect whatsoever any traditional products of Teff, be it in Ethiopia or abroad.

7.3 This **agreement** shall not affect whatsoever any non-traditional products of Teff, be it in Ethiopia or abroad, except for those the Company has specified in Annex 3 to this agreement.

7.4 This **agreement** shall not prohibit the exporting of Teff from Ethiopia to other parties. However, if an importer or anyone who buys Teff from that importer wants to use or uses Teff for making any of the products specified in Annex 3 to this agreement and this fact is brought to the attention of the **Provider**, Ethiopia will refuse to export Teff to that importer.

8 Benefit sharing

The **Company** has agreed to share the benefits that arise out of the utilization of the genetic resources of Teff.

8.1 The **Company** agrees to pay to the **Provider** a lump sum equal to the amount

$$1\% \times \frac{\text{Gross net income in the years 2007 + 2008 + 2009}}{3}.$$

This payment shall be made immediately after the publication of the annual account of the **Company** for the year 2009 (i.e. shortly after publication and shareholder approval in June 2010).

8.2 The **Company** agrees to pay to the **Provider** annually a royalty of 30% of the net profit from the sale of basic and certified seeds of the Teff varieties specified in column 3 of Annex 1 to this **agreement**.

8.3 The **Company** agrees to pay to the **Provider** annually a license fee equal to the amount defined in Annex 2.

8.4 The **Company** agrees to contribute 5% of its net profit, which shall not be less than 20,000 Euro per year, to the **Financial Resource Support for Teff,** hereafter referred to as **FiRST**. The **FiRST** shall be used for improving the living conditions of local farming communities and for developing Teff business in Ethiopia.

8.5 The **FiRST** shall be administered jointly by the **Provider** and the **Company**. The University of van Hall/Larenstein will participate in the administration of the **FiRST**. The role of van Hall/Larenstein University in the administration of the **FiRST** will be to ensure that Dutch scientific knowledge and experience with product innovation are transferred into Ethiopia in the process of using the **FiRST**. Other details of the administration of the **FiRST** shall be specified by another agreement of the parties.

8.6 The **Company** agrees to share with the **Provider** and **EARO** the results of research it will undertake on Teff. Accordingly, the **Company** shall share with the **Provider** and **EARO** the knowledge or technologies it may generate using Teff except when it constitutes Undisclosed Information to the **Company** according to Article 39 of the Agreement on Trade-related Aspects of Intellectual Property Rights of the World Trade Organization.

8.7 The **Company** agrees to involve Ethiopian scientists in the research it will undertake. The kinds of research on which Ethiopian scientists will participate and the mode of participation shall be specified by mutual agreement of the parties in the research plan of the **Company.** As appropriate, the **Company** will contract out research to Ethiopian research institutions.

8.8 The **Company** will take the **EARO** as the most preferred institution to breed Teff varieties.

8.9 By way of contributing to the Ethiopian local economy in connection with the access to Teff genetic resources, the **Company** agrees to establish profitable Teff businesses in Ethiopia, such as establishing Teff farming, cleaning and milling enterprises, bakeries, etc. The **Company** will therefore create joint ventures with Ethiopian counterparts.

8.10 Furthermore the **Company** will find funding that will augment the **FiRST** specified in paragraph 8.3 using the opportunity created by the joint ventures.

8.11 The **Company** shall acknowledge, in all its publications and application for the registration of Teff varieties and other intellectual property rights over products it will develop from Teff, that Ethiopia is the country of origin of that Teff.

9 Ownership and confidentiality

9.1 Results of any joint research conducted on Teff materials shall be owned by both parties and shall be released only upon written consent of both parties.

9.2 Information that is identified by either party as confidential shall be kept as such by both parties.

10 Duration of the agreement

The **agreement** shall remain in force for a period of 10 years. The parties may renegotiate the **agreement** at the end of that period.

11 Penalty

11.1 A party that breaches the terms of this **agreement** shall pay to the aggrieved party a penalty of 50,000 Euro if asked to do so by the aggrieved party.

11.2 The penalty that is specified in paragraph 11.1 is applicable on the **Provider** if it breaches the terms of this **agreement**, particularly those given in paragraphs 4.1, 4.4, 4.6, 4.8, 5.2, 7.3 and 7.4

11.3 The penalty that is specified in paragraph 11.1 is applicable on the **Company** if it breaches the terms of this **agreement**, particularly those given in paragraphs 4.2, 4.3, 4.5, 4.6, 4.7, 4.9, 5.1, 5.2, 5.3 and 6.

11.4 If the **Company** fails to fulfil its financial obligations as specified in part 8 of this **agreement** on 'Benefit sharing', the **Provider** may add a penalty of 5% of the due payment for any delay of between 90 and 180 days, and 25% thereafter.

12 Termination

12.1 If the company is in the process of bankruptcy, the **Provider** can immediately terminate the **agreement**.

12.2 If one of the parties repeatedly fails to fulfil or repeatedly violates its obligations under this **agreement,** then the aggrieved party may terminate the **agreement** upon 30 days notice given in writing to the other party.

12.3 Termination of this **agreement**, except in the case of bankruptcy, will be done through mutual agreement by both parties.

12.4 The termination of this **agreement** shall not affect the rights and obligations that were due to accrue to either party prior to the effective date of termination.

12.5 Starting with the day of termination of the agreement, the **Company** shall stop using the genetic resources of Teff. However, the **Company** is entitled to continue

the use of co-owned Teff varieties upon payment of royalties to be mutually agreed upon by both parties.

13 Dispute settlement

13.1 If any dispute arises in connection with the interpretation or application of this agreement, both parties shall seek solution by negotiation. If the dispute cannot be resolved by negotiation, it shall be submitted to an arbitration body in accordance with the procedure laid down in part I of Annex II of the Convention on Biological Diversity.

13.2 For the purpose of Paragraph 13.1, the word "party" in Part I of Annex II of the Convention on Biological Diversity shall mean "**Provider**" or "**Company**".

13.3 The decision of the arbitral tribunal shall be final and binding on the parties without appeal.

13.4 If either of the parties fails to comply with the award of the arbitral tribunal, the aggrieved party may, in accordance with Paragraph 16 (d) (iv) of the Annex to Section A of Decision VI/24 of the 6th Conference of the Parties of the Convention on Biological Diversity, UNEP/CBD/COP/6/20, the Hague, 7-19 April 2002, ask the Government of the Federal Democratic Republic of Ethiopia or the Government of the Netherlands to enforce the award given by the arbitral tribunal.

14 Guarantee

Each year, the **Company** shall pay a sufficient sum of money in advance from which the requests by the provider for payment will be subtracted.

15 Applicable laws

15.1 The Convention on Biological Diversity (CBD) and the relevant decisions, guidelines and laws that emanate from it, including the International Treaty on Plant Genetic Resources for Food and Agriculture, in particular but not restricted to, its Article 9 on Farmers' Rights, the Bonn Guidelines, decisions of the various Conferences of the parties as well as those provisions of the Union for the Protection of New Plant Varieties (UPOV) that are consistent with the CBD and the relevant decisions, guidelines, and laws that emanate from it shall apply to matters not addressed in this agreement.

15.2 The CBD and the decisions, guidelines or laws that emanate form it shall prevail over the UPOV in cases on which the two do not agree.

16 Monitoring and follow-up

16.1 The **Company** shall submit to the **Provider** annual research and financial reports.

16.2 The **Provider** has the right to review at any moment, through an independent accountant if it so wishes, the bookkeeping as well as the relevant administrative details of the items covered by this **agreement.**

16.3 Meetings between the two parties will be held as required to exchange information.

17 Annexes to the agreement

The following Annexes shall form part of this **agreement.**

17.1 Annex 1: Varieties of Teff accessed by S&C. This Annex shows the different varieties of Teff and the authorization of use given by the **Provider** to the **Company**. This Annex may be updated by mutual agreement of the parties as needed.

17.2 Annex 2: Annual payments of licence fee per hectare for growing Teff. The annual payment of the licence fee provided for in Paragraph 8.3 will be determined after each harvest season based on this Annex.

17.3 Annex 3: List of products of the **Company.** This Annex shall be updated by mutual agreement of the parties as needed.

Annex 1 - Teff Varieties that the **Company** Can Use to Make Food and Beverage Products

		EARO owned		co-owned EARO and HPFI		
official name	HPFI name	registered	applied for registration (date)	registered	applied for registration (date)	planned to be registered in year
DZ-0-1681	-	yes		no	no	no
DZ-Cr-358	S&C2	yes		no	no	no
DZ-Cr-255	S&C3	yes		no	no	no
DZ-Cr-44	S&C6	yes		no	no	no
DZ-Cr-82	S&C7	yes		no	no	no
DZ-Cr-37	S&C12	yes		no	no	no
DZ-01-354	S&C5	yes		no	no	no
DZ-01-974	S&C8	yes		no	no	no
DZ-01-787	S&C9	yes		no	no	no
DZ-01-196	S&C11	yes		no	no	no
DZ-01-99	S&C10	yes		no	no	no
DZ-01-1285	-	yes		no	no	no
-	S&C101	no		no	no	2004
-	S&C105	no		no	no	2004
-	S&C106	no		no	no	2004
-	S&C107	no		no	no	2004
-	S&C111	no		no	no	2004
-	S&C117	no		no	no	2004
-	S&C112	no		no	no	2004
-	S&C109	no		no	no	2004

Annex 2 - Annual payments to be made by the **Company** to the **Provider** according to Paragraph 8.3 on per hectare basis for growing Teff by the **Company** and by anybody supplied seed by the **Company**

official name	HPFI name	Ownership	area	annual payment < 2500 kg per hectare	annual payment 2500 - 3499 kg per hectare	annual payment 3500 and more per hectare
DZ-0-1681	-	EARO	Europe	€ 10.00	€ 20.00	€ 25.00
DZ-Cr-358	S&C2	EARO	Europe	€ 10.00	€ 20.00	€ 25.00
DZ-Cr-255	S&C3	EARO	Europe	€ 10.00	€ 20.00	€ 25.00
DZ-Cr-44	S&C6	EARO	Europe	€ 10.00	€ 20.00	€ 25.00
DZ-Cr-82	S&C7	EARO	Europe	€ 10.00	€ 20.00	€ 25.00
DZ-Cr-37	S&C12	EARO	Europe	€ 10.00	€ 20.00	€ 25.00
DZ-01-354	S&C5	EARO	Europe	€ 10.00	€ 20.00	€ 25.00
DZ-01-974	S&C8	EARO	Europe	€ 10.00	€ 20.00	€ 25.00
DZ-01-787	S&C9	EARO	Europe	€ 10.00	€ 20.00	€ 25.00
DZ-01-196	S&C11	EARO	Europe	€ 10.00	€ 20.00	€ 25.00
DZ-01-99	S&C10	EARO	Europe	€ 10.00	€ 20.00	€ 25.00
DZ-01-1285	-	EARO	Europe	€ 10.00	€ 20.00	€ 25.00
DZ-0-1681	-	EARO	North America	$ 10.00	$ 20.00	$ 25.00
DZ-Cr-358	S&C2	EARO	North America	$ 10.00	$ 20.00	$ 25.00
DZ-Cr-255	S&C3	EARO	North America	$ 10.00	$ 20.00	$ 25.00
DZ-Cr-44	S&C6	EARO	North America	$ 10.00	$ 20.00	$ 25.00
DZ-Cr-82	S&C7	EARO	North America	$ 10.00	$ 20.00	$ 25.00
DZ-Cr-37	S&C12	EARO	North America	$ 10.00	$ 20.00	$ 25.00
DZ-01-354	S&C5	EARO	North America	$ 10.00	$ 20.00	$ 25.00
DZ-01-974	S&C8	EARO	North America	$ 10.00	$ 20.00	$ 25.00
DZ-01-787	S&C9	EARO	North America	$ 10.00	$ 20.00	$ 25.00
DZ-01-196	S&C11	EARO	North America	$ 10.00	$ 20.00	$ 25.00
DZ-01-99	S&C10	EARO	North America	$ 10.00	$ 20.00	$ 25.00
DZ-01-1285	-	EARO	North America	$ 10.00	$ 20.00	$ 25.00
-	S&C101	EARO/S&C	Europe	€ 5.00	€ 10.00	€ 15.00
-	S&C105	EARO/S&C	Europe	€ 5.00	€ 10.00	€ 15.00
-	S&C106	EARO/S&C	Europe	€ 5.00	€ 10.00	€ 15.00
-	S&C107	EARO/S&C	Europe	€ 5.00	€ 10.00	€ 15.00
-	S&C111	EARO/S&C	Europe	€ 5.00	€ 10.00	€ 15.00
-	S&C117	EARO/S&C	Europe	€ 5.00	€ 10.00	€ 15.00
-	S&C112	EARO/S&C	Europe	€ 5.00	€ 10.00	€ 15.00
-	S&C109	EARO/S&C	Europe	€ 5.00	€ 10.00	€ 15.00
-	S&C101	EARO/S&C	North America	$ 5.00	$ 10.00	$ 15.00
-	S&C105	EARO/S&C	North America	$ 5.00	$ 10.00	$ 15.00
-	S&C106	EARO/S&C	North America	$ 5.00	$ 10.00	$ 15.00
-	S&C107	EARO/S&C	North America	$ 5.00	$ 10.00	$ 15.00
-	S&C111	EARO/S&C	North America	$ 5.00	$ 10.00	$ 15.00
-	S&C117	EARO/S&C	North America	$ 5.00	$ 10.00	$ 15.00
-	S&C112	EARO/S&C	North America	$ 5.00	$ 10.00	$ 15.00
-	S&C109	EARO/S&C	North America	$ 5.00	$ 10.00	$ 15.00

Annex 3 - Prodcuts that the **Company** Can Make from the Teff Varieties in Annex 1

List of products of HPFI

				markets										
product group	**product name**	**subproducts**	**category**	**general**	**gluten free**	**sport food /beverages**	**natural food**	**performance food**	**organic food**	**no wheat**	**medicines**	**coatings**	**beverages**
flour	gluten free flour	100% teff	white		y	y	y	y	y	y			
			brown		y	y	y	y	y	y			
		premix	white		y	y	y	y	y	y			
			brown		y	y	y	y	y	y			
		breadmix with Teff	white		y	y	y	y	y	y			
			brown		y	y	y	y	y	y			
seeds	gluten free beverages	beer	pilsener		y								y
		distilled drinks	liquors				y						y
			genever				y						y

Annex II

የኢትዮጵያ ፌዴራላዊ ዲሞክራሲያዊ ሪፐብሊክ
የብዝሀ ሕይወት ጥበቃ ኢንስቲትዩት
The Federal Democratic Republic of Ethiopia
Institute of Biodiversity Conservation

Ref. NO IBC 62/2013/2011

15 NOV 2011

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Your ref.: RG/CK–29521.20

Bankruptcy of Health and Performance Food International B.V.

Dear Mr. R. A. A. Geene,

In reference to your letter of 7 December 2010, informing us about the bankruptcy of the Health and Performance Food International B.V. (HPFI), we hereby wish to inform you about the state of the Agreement on Access to, and Benefit Sharing from, Teff Genetic Resources between the Ethiopian Institute of Biodiversity Conservation (IBC), Ethiopian Institute of Agricultural Research (EIAR, formerly Ethiopian Agricultural Research Organization, EARO), and announce our claims towards HPFI.

As you may be aware of, the Agreement was signed by the parties listed above on 05 April 2005. Whereas Ethiopia provided the HPFI with valuable teff genetic resources according to the Agreement and granted HPFI with extensive rights with regard to teff genetic resources (*inter alia* by excluding the possibility for Ethiopia of entering into agreements with other companies with regard to similar products), HPFI complied only to a minimal extent as shown below. The IBC, which is the 'provider' in terms of the Agreement (Art. 2)

was never informed by HPFI about the developments leading to the bankruptcy, or about the bankruptcy itself. Thus, IBC has not had the chance to terminate the Agreement because of the bankruptcy, as it should have done according to Article 12.1 of the Agreement, before you informed us about this situation.

Our claims are as follows:

1. **The use of teff genetic resources:** According to Article 12.5, starting with the day of termination of the Agreement, HPFI shall stop using the genetic resources of teff. According to Article 6, the HPFI is not entitled to transfer Teff seed samples or any component of the genetic resources of Teff to third parties without first having explicit written consent from the provider. IBC has never given such consent. For these two reasons, we claim that any company established by the former owners of HPFI, including Ecosem, is prohibited from using teff genetic resources received through this Agreement.

2. **Rights over traditional knowledge related to teff:** According to Article 4.5, HPFI was not permitted to claim any rights over, nor make commercial benefit out of, traditional Ethiopian knowledge related to teff, unless explicitly written agreement is given to it by the provider. IBC, as the designated provider in this Agreement, has never given such a written agreement. Nevertheless, HPFI has patented the processing of teff flour in Europe (EP 1646287 B1), which covers such traditional Ethiopian practices as seed storing after harvesting to improve the baking quality of the flour, and the making of dough. With reference to Article 4.5, we claim that this patent is a breach of the Agreement, in particular if the patent has been transferred to a third party, namely Ecosem – or any other company owned by the previous owners of HPFI, and demand that it is withdrawn.

3. **Plant variety protection rights:** The plant variety protection rights over the varieties of Teff developed on the basis of material from Ethiopia, should in accordance with Art. 5.2 be co-owned by HPFI and EARO. However, EARO was not made co-owner of the varieties. Instead a foundation was set up by HPFI, Stichting SCEAR, and made owner of the varieties. EARO has not been involved in this process at all and has not received any benefits from licences. IBC thus claims the Ethiopian share of any

licence fees received for the registered teff varieties, as defined in Annex 2 of the Agreement for the period from the Agreement was signed and until this termination of the Agreement. We further demand that samples of these varieties are returned to EIAR (formerly EARO) as their only remaining legitimate owner, and that the plant variety protection of these varieties is terminated.

4. **Further monetary benefit sharing:** HPFI was obliged, according to Article 8 of the Agreement to pay a lump sum to the provider according to Art. 8.1 for 2007, 2008 and 2009; to pay annual royalties to the provider of 30% of the net profit from seed sales according to Art. 8.2.; to pay license fee (Article 8.3) and to pay five percent of its net profit to the FiRST Fund to improve the living conditions of local farming communities and for developing teff business in Ethiopia (Art. 8.4 and 8.5). IBC received EUR 4,000,- in March 2007, but without any reference to which part of the Agreement this transaction was related to. None of the other monetary benefits have materialised. We, therefore, demand that these monetary benefits are realized.

5. **Penalty for breaching the Agreement:** According to Article 1.1, a party that breaches the terms of this Agreement shall pay to the aggrieved party a penalty of 50,000,- Euro if asked by the aggrieved party to do so. According to Article 11.3, this penalty is applicable to HPFI if it breaches the terms of the Agreement, particularly those given in paragraphs 4.2, 4.3, 4.5, 4.6, 4.9, 5.1, 5.2, 5.3 and 6. As shown above, the company has breached central parts of the agreement, including several of those referred to in Art. 11.3. To mention some, it has breached Art. 4.5 on traditional knowledge (see point 2 above), Art. 5.2 on plant variety property rights (see point 3 above), and Art. 6 on transfer to third parties (since the material is now used by Ecosem, as stated in your letter). HPFI has also breached most other provisions, such as Art. 4.7 and 8.11, acknowledging that the teff genetic resources it has acquired are of Ethiopian origin, art. 8 on benefit sharing as stated above (point 4), in addition to all of the provisions on monitoring and follow-up (Art. 16). We, therefore, claim EUR 50,000,- as penalty from HPFI for breaching of the Agreement.

6. **Additional penalty for failing to fulfil its financial obligations:** According to Art. 11.4 of the Agreement, the provider, i.e. IBC, may add a penalty of 5% of the due payment specified in Article 8, for any delay of between 90 and 180 days, and 25% thereafter. As HPFI did not only breach the provisions of Art. 8, as stated in points 3

and 4 above, but also breached the monitoring provisions of the Agreement, the IBC is not in a position to calculate what such a penalty amounts to. Nevertheless, we demand an additional penalty from the HPFI, to be calculated by the public receiver on basis of Art. 11.4.

Furthermore, we claim benefits Ethiopia lost over these years. Please let us know if you need any documentation regarding these claims, or if any other action is required from our side.

Yours sincerely,

Gemedo Dalle (Dr.)
Director General

CC.

- Ministry of Agriculture
  Addis Ababa
- The Netherlands Embassy
  Addis Ababa
- Genetic Resources Transfer and Regulation Directorate
  Institute of Biodiversity Conservation
  Addis Ababa

Geene | Doornbosch | De Willigen
advocaten en adviseurs

Zwedenlaan 20 - 22, 9403 DE Assen
Postbus 622, 9400 AP Assen

T 0592 345 188
F 0592 372 431
info@geene.nl
www.geene.nl

To Dr. Gemedo Dalle Tussie
Director Genetic Resources Transfer and Regulation Directorate
Institute of Biodiversity Conservation

E-mail: gemedod@yahoo.com

Assen, 7 december 2010
Inzake : **Health & Performance Food International B.V./ Faillissement**
RG/CK – 29521.20
Uw ref :
Curator : mr. R.A.A. Geene, r.geene@geene.nl

Dear Dr. Gemedo Dalle Tussie,

Herewith I am informing you that the two companies Health and Performance Food International (HPFI) and Soil & Crop Improvement (S&C) have been declared bankrupt on August 4, 2009 by the court of Assen(the Netherlands). I have been appointed as public receiver.

I kindly request you to send me an overview of the claims to the above mentioned address with an explanation, for the registration.

Meanwhile I have been informed that it recently became clear that at least two years before the bankruptcy of HPFI/S&C the two directors of the companies already set up a new company **Ecosem** (with related companies Ancientgrain BV, Prograin International BV, Ecosem Europe; located at the address of mr. J. Turkensteen, Zwiggelterweg 2, NL 9414 TN Hooghalen, The Netherlands). I have been informed that in the growing seasons of 2009 and 2010 Ecosem was cultivating/growing Teff in Spain near Palencia (at least 1000 ha in 2010) and that there is a strong suspicion of using Teff in unknown areas in other countries like Germany, Belgium, Rumania and South Africa.

Yours sincerely,

Mr. R.A.A. Geene
(Public Receiver).

Annex III

ማውጫ

አዋጅ ቁጥር ... /<u>ፕየበ</u> ዓ.ም.

የጂኔቲክ ሀብትና የማኅበረሰብ ዕውቀት አርክቦት እና የማኅበረሰብ መብቶችን ለመወሰን የወጣ

<u>አዋጅ</u>

ኢትዮጵያ ያላት ከፍተኛ የብዝሀ ሕይወት ፀጋ ለሕዝቧ ጥቅምና ብልጽግና እንዲውል በአግባቡ መጠበቅና በዘላቂነት ጥቅም ላይ መዋል ያለበት በመሆኑ፣

ብዝሀ ሕይወትን በመንከባከብ፣ በማጎልበት፣ በማበልፀግና በዘላቂነት በመጠቀም ረገድ የኢትዮጵያ ማኅበረሰቦች ላደረጉት አስተዋጽኦ እውቅና መስጠትና ይህንን አስተዋጿቸውን እንዲቀጥሉበት ማበረታታት አስፈላጊ በመሆኑ፣

ኢትዮጵያ የብዝሀ ሕይወት ኮንቬንሽንና የጂኔቲክ ሀብቶች አርክቦትና ሀብቶቹን በመጠቀም የሚገኙ ጥቅሞችን ሚዛናዊና ተመጣጣኝ በሆነ መልኩ ለመጋራት የተደረገውን የናጎያ ፕሮቶኮል የተቀበለች በመሆኗና ኮንቬንሽኑም ሆነ ፕሮቶኮሉ ፈራሚ አገሮች አርክቦትና ጥቅም ተጋሪነትን አስመልክቶ ሕጋዊ፣ አስተዳደራዊና የፖሊሲ እርምጃዎችን እንዲወስዱ የሚጠይቁ በመሆናቸው፣

የጂኔቲክ ሀብት እንዲጠበቅና በዘላቂነት ጥቅም ላይ እንዲውል ለማድረግ በሚያስችል መልኩ የኢትዮጵያ ማኅበረሰቦች ያዳበሩት የጂኔቲክ ሀብት ክብካቤና ባሕላዊ የአጠቃቀም ሥርዓት ሊጠበቅና ሊበረታታ የሚገባው በመሆኑ፣

የጂኔቲክ ሀብት ክብካቤና አጠቃቀምን በሚመለከት የኢትዮጵያ ማኅበረሰቦች ያካበቱትና ያዳበሩት ዕውቀት ዕውቅና ሊያገኝና ጥበቃ ሊደረግለት እንዲሁም በእነዚህ ማኅበረሰቦች ፈቃድና የጥቅም ተካፋይነት በሰፊው ተግባር ላይ እንዲውል ሊበረታታ የሚገባው በመሆኑ፣

የጂኔቲክ ሀብት ጥቅም ላይ እንዲውል በመፍቀዱና ከሚገኘው ጥቅም በመጋራት ረገድ በሚሰጥ ውሳኔ ላይ የአካባቢ ማኅበረሰቦች እንዲሳተፉ ማድረግ አስፈላጊ በመሆኑ፣

የጂኔቲክ ሀብቶች ለምግብና ለግብርና ሥራ የሚሰጡትን ጥቅም እንዲሁም ለዓለም የምግብ ዋስትና ያላቸውን ቁልፍ ሚና አስመልክቶ ሁሉም አገሮች ተደጋጋፊ በመሆናቸው፣

የብዝሀ ሕይወትን ለመጠበቅ፣ ድህነትን ለማጥፋት ብሎም ዘላቂ ልማትን ለማሳካት የአርክቦትና ጥቅም ተጋሪነት አስተዋጽኦን በመገንዘብ፣

ሴቶች አርክቦትና ጥቅም ተጋሪነትን በመተግበርና ብዝሀ ሕይወትን በመንከባከብ ረገድ የሚጫወቱትን ወሳኝ ሚና ግምት ውስጥ በማስገባት፣

እነዚህን ዓላማዎች በተግባር ለማዋል የጂኔቲክ ሀብትና የማኅበረሰብ ዕውቀት አርክቦት እና

Contents

Proclamation No. XXXX/2019

A Proclamation to Provide for Access to Genetic Resources and Community Knowledge and Community Rights

WHEREAS, the immense biodiversity wealth Ethiopia is endowed with shall be conserved and sustainably used for the benefit and development of its people;

WHEREAS, it is necessary to recognize the contribution that the Ethiopian communities made to the conservation, enhancement, development and sustainable use of biodiversity resources;

WHEREAS, Ethiopia is a party to the Convention on Biological Diversity and the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Use and both the Convention and the Protocol require parties to put in place legislative, administrative or policy measures on access and benefit-sharing;

WHEREAS, it is necessary to protect and encourage the customary use of genetic resources by Ethiopian communities which are relevant to the conservation and sustainable use of the biodiversity resources of the country;

WHEREAS, it is necessary to recognize and protect the knowledge of Ethiopian communities generated and accumulated with respect to the conservation and use of genetic resources and promote the wider application of such knowledge with the approval and sharing benefits by such communities;

WHEREAS, it is necessary to involve communities in the making of decisions concerning the use of genetic resources and community knowledge and sharing of benefits derived from the use thereof;

WHEREAS, recognizing the interdependence of all countries with regard to the importance of genetic resources for food and agriculture and their key roles in achieving food security worldwide;

WHEREAS, recognizing the contribution of access and benefit-sharing for biodiversity protection, poverty eradication and thereby for the achievement of sustainable development;

WHEREAS, recognizing the vital role of women in the implementation of access and benefit sharing and conservation of biodiversity;

WHEREAS, in order to realize these objectives, it is necessary to determine

ማኅበረሰቦች በጄኔቲክ ሀብታቸውና የማኅበረሰብ ዕውቀታቸው ላይ ያላቸውን መብት በሕግ መወሰን አስፈላጊ በመሆኑ፣

ይህ አዋጅ ከመውጣቱ በፊት በሥራ ላይ የነበረው የጄኔቲክ ሀብትና የማኅበረሰብ ዕውቀት አርክቦት እና የማኅበረሰብ መብቶች አዋጅ የነበሩበትን ክፍተቶች ለመሸፈን የሚያስችል አዲስ ሕግ ማውጣት በማስፈለጉ፣

በኢትዮጵያ ፌዴራላዊ ዲሞክራሲያዊ ሪፐብሊክ ሕገ መንግሥት አንቀጽ ፶፭ (፩) መሠረት የሚከተለው ታውጇል።

ክፍል አንድ

ጠቅላላ ድንጋጌዎች

፩. አጭር ርዕስ

ይህ አዋጅ "የጄኔቲክ ሀብትና የማኅበረሰብ ዕውቀት አርክቦት እና የማኅበረሰብ መብቶች አዋጅ ቁጥር ..../፳፻፲፩" ተብሎ ሊጠቀስ ይችላል።

፪. ትርጓሜ

የቃሉ አገባብ ሌላ ትርጉም የሚያሰጠው ካልሆነ በስተቀር በዚህ አዋጅ ውስጥ፣

(፩) "አርክቦት" ማለት የጄኔቲክ ሀብትን ወይም የማኅበረሰብ ዕውቀትን መሰብሰብ፣ መውሰድ፣ ማስተላለፍ፣ ወይም መጠቀም ነው፣

(፪) "ሕይወታዊ ሀብት" ማለት ለሰው ልጅ ጠቀሜታ ያለው ወይም ወደፊት ሊኖረው የሚችል የጄኔቲክ ሀብት፣ የእርሱ ሕዋሳት ወይም የእርሱ ስብስብ ወይም ማንኛውም የሥርዓተ ምሕዳር ሕይወት ያለው አካል ነው፣

(፫) "ተዋጽኦ" ማለት በተፈጥሮ የሚገኝ የባዮኬሚካል ውህድ ወይም ከሕይወታዊ ሀብት ተለይቶ የወጣ ወይም የተዘጋጀ ውጤት ሲሆን ፕሮቲኖችን፣ ኬሚካሎችን፣ ዘይቶችን፣ ዕጣኖችን፣ ሙጫዎችን፣ ዝባድን፣ የዕፅዋት ዝርያዎችንና፣ የመሳሰሉትን ይጨምራል፣

(፬) "ኢዘቦታ" ማለት የጄኔቲክ ሀብት በተፈጥሮ ከሚገኝበት ቦታው ውጪ የሚገኝበት ሁኔታ ነው፣

(፭) "አሰሳ" ማለት አንድ ጄኔቲክ ሀብት መኖሩን ወይም ያለበትን ሁኔታ ለማወቅ የሚደረግ ፍለጋ ነው፣

(፮) "የጄኔቲክ ሀብት" ማለት ለሰው ልጅ ጠቀሜታ ያለው ወይም ወደፊት ጠቀሜታ ሊኖረው የሚችል የሕይወታዊ ሀብትን የዘር ባሕሪ የያዘ የጄኔቲክ ቁስ ሲሆን፣ ተዋጽኦውንና ዲጂታል ሲኩዌንስ ኢንፎርሜሽንንም ይጨምራል፣

(፯) "ዘቦታ" ማለት የጄኔቲክ ሀብት በተፈጥሮ በሚገኝበት አካባቢ ወይም ሥርዓተ

by law the access to genetic resources and community knowledge, and to provide for the rights of communities over genetic resources and community knowledge;

WHEREAS, it has become necessary to issue a new law that fills the gaps of the previous Access to Genetic Resources and Community Knowledge and Community Rights Proclamation;

NOW, THEREFORE, in accordance with Article 55(1) of the Constitution of the Federal Democratic Republic of Ethiopia, it is hereby proclaimed as follows:

PART ONE

GENERAL PROVISIONS

1. Short Title

This Proclamation may be cited as "Access to Genetic Resources and Community Knowledge and Community Rights Proclamation No. 11XX/2019"

2. Definitions

In this Proclamation, unless the context requires otherwise:-

(1) "Access" means the collection, acquisition, transfer or use of genetic resources or community knowledge;

(2) "Biological resources" includes genetic resources, organisms or parts thereof, populations or any other biotic component of ecosystem with actual or potential value for humanity;

(3) "Derivative" means a naturally occurring biochemical compound or a product that extracted or developed from biological resource, this may include products such as proteins, chemicals, oils, resins, gums, civet or musk and plant varieties;

(4) "Ex situ" means a condition in which genetic resource is found outside of its natural habitat;

(5) "Exploration" means an activity to find out the existence or the status of a given genetic resource;

(6) "Genetic resource" means any genetic material of biological resource containing genetic information having actual or potential value for humanity and including its derivatives and digital sequence information;

(7) "In situ" means a condition in which genetic resource is found in its natural habitat or ecosystem;

ምሕዳሩ ውስጥ የሚገኝበት ሁኔታ ነው፣

(፰) “ኢንስቲትዩት” ማለት በደንብ ቁጥር ፪፻፺፩/፳፻፭ የተቋቋመው የኢትዮጵያ ብዝሀ ሕይወት ኢንስቲትዩት ነው፣

(8) “Institute” means the Ethiopian Biodiversity Institute established by Regulation No. 291/2013

(፱) “የአካባቢ ማኅበረሰብ” ማለት አንድ የጄኔቲክ ሀብትን ተንከባክቦ ይዞ የሚገኝ ወይም የአንድ ማኅበረሰብ ዕውቀት ፈጣሪ የሆነና በኢትዮጵያ በአንድ በተወሰነ የመልክዓ ምድራዊ አካባቢ የሚገኝ የሰዎች ስብስብ ነው፣

(9) “Local community” means a human population living in a distinct geographical area in Ethiopia as a custodian of a given genetic resource or creator of a given community knowledge;

(፲) “ሰው” ማለት የተፈጥሮ ወይም በሕግ የሰውነት መብት የተሰጠው አካል ነው፣

(10) “Person” means a natural or a juridical person;

(፲፩) “አስቀድሞ በመገንዘብ የሚሰጥ እሽታ” ማለት የተወሰነ የጄኔቲክ ሀብትን ወይም የማኅበረሰብ ዕውቀትን ማርከብ የሚፈልግ ሰው አርከቦት ከመፈጸሙ በፊት በሚያቀርበው ትክክለኛና የተሟላ መረጃን የያዘ የአርከቦት ጥያቄ ላይ በመመሥረት ግለሰቡ የጄኔቲክ ሀብቱን ወይም የማኅበረሰብ ዕውቀትን እንዲያረክብ ኢንስቲትዩቱ እና የሚመለከተው የአካባቢ ማኅበረሰብ የሚሰጡት ይሁንታ ነው፣

(11) “Prior informed consent” means the consent given by the Institute and the concerned local community based on an access application containing a complete and accurate access information to a person seeking access to a specified genetic resource or community knowledge;

(፲፪) “የማኅበረሰብ ዕውቀት” ማለት የጄኔቲክ ሀብት ማንበርን ወይም መጠቀምን በሚመለከት የአካባቢ ማኅበረሰቦች የፈጠሩት ወይም ለዘመናት ያዳበሩት ዕውቀት፣ አሠራር፣ ፈጠራ ወይም ጥበብ ነው፣

(12) “Community knowledge” means knowledge, practices, innovations or technologies created or developed over generations by local communities on the conservation and use of genetic resources;

(፲፫) “ብዝሀ ሕይወት” ማለት በየትኛውም ሥርዓተ ምሕዳር በሚገኙ ሕይወት ባላቸው ነገሮች መካከል የሚገኙ ተለያይነት ሲሆን፣ ይህም በዝርያዎች ውስጥ፣ በዝርያዎች እና በሥርዓተ ምሕዳሮች መካከል ያለውን ተለያይነት ይጨምራል፣

(13) “Biodiversity” means the variability among living organisms from all sources of ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems;

(፲፬) “ጄኔቲክ ሀብትን መጠቀም” ማለት በጄኔቲክ ሀብት ወይም በጄኔቲክ ሀብቱ ባዮኬሚካል ጥንቅር ላይ ምርምር ወይም ልማት ማካሄድ ሆኖ ባዮቴክኖሎጂን ጭምር በመጠቀም ማበልፀግን ያካትታል። ባዮቴክኖሎጂ የብዝሀ ሕይወት ኮንቬንሽን በአንቀጽ 2 የሰጠውን ትርጉም ይወስዳል፣

(14) “Genetic resource use” means conducting research or development on the genetic or biochemical composition of genetic resources, including through the application of biotechnology as defined in Article 2 of the Convention on Biological Diversity;

(፲፭) “ለንግድ ዓላማ መጠቀም” ማለት፣ ለንግድ ወይም ለኢንዱስትሪ ምርት ዓላማ ሕይወታዊ ወይም ጄኔቲካዊ ሀብትን ወይም የማኅበረሰብ ዕውቀትን በመጠቀም ምርምር ማካሄድ ወይም ኤንዛይሞችን፣ ለምግብ ቃና ሰጪ ምርቶችን፣ ባለመዓዛ ዘይቶችን፣ የመዋቢያ ምርቶችንና የመሳሰሉትን ለንግድ ዓላማ ማምረት ነው፣

(15) “Commercial use” means any research, development or application of, biological or genetic resources or community knowledge for commercial or industrial exploitation and application for production of drugs, industrial enzymes, food flavors, fragrances, essential oils, cosmetics, colors, and the like;

(፲፮) “ለንግድ ዓላማ ያልሆነ አጠቃቀም” ማለት የጄኔቲክ ሀብትን ወይም የማኅበረሰብ ዕውቀትን ከንግድ ዓላማ ውጭ ለሆነ ምርምር ወይም ልማት መጠቀም ማለት ነው፣

(16) “Noncommercial use” means any use of genetic resources or community knowledge for purposes of research or development that does not involve commercial use;

(፲፯) “የጋራ ስምምነት ውል” ማለት በኢንስቲትዩቱ እና የጄኔቲክ ሀብትን ወይም የማኅበረሰብ ዕውቀትን ለማርከብ ማመልከቻ በሚያቀርብ ሰው መካከል አርከቦትንና ጥቅም ተጋሪነትን አስመልክቶ የሚደረግ ስምምነት ነው፣

(17) “Mutually agreed terms” means an agreement made between the Institute and the person who applies to access genetic resources or community knowledge on conditions of access and benefit-sharing;

(፲፫) “ልዩ የአርከቦት ፈቃድ” ማለት በዚህ አዋጅ የተደነገጉ የተለዩ ዓላማዎችን ለማሳካት ሲባል የጂኔቲክ ሀብትን ወይም የማኅበረሰብ ዕውቀትን ለማርከብ ፈቃድ ለሚጠይቅ ሰው የአዋጁ መስፈርቶችና ግዴታዎች ተፈጻሚ የማይሆኑበት በኢንስቲትዩቱ የሚሰጥ ልዩ ፈቃድ ነው፣

(፲፬) “ማንበር” ማለት የጂኔቲክ ሀብትን በመጠበቅ፣ በመንከባከብና፣ በማልማት በዘላቂነት መጠቀም ነው፣

(፲፭) “ሱይ ጀነሪስ” ማለት በመደበኛው የአዕምሯዊ ንብረት መብት ለማይሸፈኑ መብቶች የአዕምሯዊ ንብረት መብት የሚከበርበት ልዩ ሥርዓት ነው።

፫. ዓላማ

የዚህ አዋጅ ዓላማ የሀገሪቱ የጂኔቲክ ሀብት እና የማኅበረሰብ ዕውቀት ጥቅም ላይ በመዋሉ ከሚገኘው ጥቅም ሀገሪቱና ማኅበረሰቦቿ ፍትሐዊና ሚዛናዊ የሆነ ድርሻ እንዲያገኙ በማድረግ፣ የብዝሀ ሕይወት ሀብት እንዲጠበቅና በዘላቂነት ጥቅም ላይ እንዲውል ማደረግ ነው።

፬. የተፈጻሚነት ወሰን

(፩) ይህ አዋጅ በዘቦታ ወይም በኢዘቦታ በሚገኙ የጂኔቲክ ሀብቶች እና በማኅበረሰብ ዕውቀት አርከቦት ላይ ተፈጻሚ ይሆናል፣

(፪) የዚህ አንቀጽ ንዑስ አንቀጽ (፩) ድንጋጌ ቢኖርም፣ ይህ አዋጅ ቀጥሎ በተጠቀሱት ጉዳዮች ላይ ተፈጻሚነት አይኖረውም፣

(ሀ) የኢትዮጵያ የአካባቢ ማኅበረሰቦች ራሳቸው ወይም በመካከላቸው በሚያደርጉት ልማዳዊ የጂኔቲክ ሀብትና የማኅበረሰብ ዕውቀት ልውውጥና መጠቀም፣

(ለ) የጂኔቲክ ሀብት ወይም የማኅበረሰብ ዕውቀት መጠቀምን ለማያስከትል የሕይወታዊ ሀብት ምርትን ለምግብ ወይም ለመኖ በቀጥታ ለመጠቀም ሲባል በሚደረግ ግብይት ወይም ባዮትሬድ፣

(ሐ) የጂኔቲክ ሀብት ወይም የማኅበረሰብ ዕውቀት መጠቀምን በማያስከትል መንገድ ሕይወታዊ ሀብትን ማሳደግ፣ መትከል ወይም ሌላ ተመሳሳይ ድርጊት መፈጸም፣

(መ) የሰው ጂኔቲክ ማቴሪያል።

፭. ባለቤትነት

(፩) የጂኔቲክ ሀብት ባለቤትነት የመንግሥትና የኢትዮጵያ ሕዝብ ነው።

(፪) የማኅበረሰብ ዕውቀት ባለቤትነት የሚመለከተው የአካባቢ ማኅበረሰብ ይሆናል።

ክፍል ሁለት

(18) “Special access permit” means a permit granted by the Institute to a person to access genetic resources or community knowledge for a particular purpose stipulated under this Proclamation without necessarily following the procedures and requirements stipulated under this Proclamation;

(19) “Conservation” means protection, preservation and development of genetic resources and using them in a sustainable manner;

(20) “Sui generis” means a special system designed to protect intellectual property rights that fall outside the traditional intellectual property rights.

3. Objective

The objective of this Proclamation is to ensure that the country and its communities obtain a fair and equitable share from the benefits arising out of the use of genetic resources or community knowledge so as to promote the conservation and sustainable use of the country’s biodiversity resources.

4. Scope of Application

(1) This Proclamation shall apply on access to genetic resources found in in-situ or ex-situ conditions and community knowledge;

(2) Notwithstanding the provision of sub article (1) of this Article, this Proclamation shall not apply to:

(a) the customary use and exchange of genetic resources and community knowledge by and among Ethiopian local communities;

(b) the sale of produce of biological resources or bio-trade for direct consumption such as food or feed, that do not involve the use of the genetic resources or community knowledge;

(c) rearing, planting or related activities of biological resources that do not involve the use of genetic resources or community knowledge;

(d) human genetic material.

5. Ownership

(1) The ownership of genetic resources shall be vested in the state and the Ethiopian people.

(2) The ownership of community knowledge shall be vested in the concerned local community.

PART TWO

የማኅበረሰብ መብቶች መከበር

፮. መርህ

የአካባቢ ማኅበረሰቦች በጄኔቲክ ሀብታቸውና በማኅበረሰብ ዕውቀታቸው ላይ የሚከተሉት መብቶች አሏቸው፣

(፩) በማኅበረሰብ ዕውቀታቸው ላይ የሚፈፀም አርክቦትን የመቆጣጠር መብት፣

(፪) የጄኔቲክ ሀብታቸውንና የማኅበረሰብ ዕውቀታቸውን የመጠቀም መብት፣

(፫) የጄኔቲክ ሀብታቸውና የማኅበረሰብ ዕውቀታቸው ጥቅም ላይ በመዋሉ ከሚገኘው ጥቅም የመጋራት መብት።

፯. አርክቦትን የመቆጣጠር መብት

የአካባቢ ማኅበረሰቦች አርክቦትን ለመቆጣጠር ያላቸው መብት የሚከተሉትን ይጨምራል፣

(፩) ለማኅበረሰብ ዕውቀት አርክቦት አስቀድሞ በመገንዘብ የሚሰጥ እሽታ የመፈጸም መብት፣

(፪) አስቀድሞ በመገንዘብ የሚሰጥ እሽታ እንዲፈጽሙ በሚጠየቁ ጊዜ የታሰበው የአርክቦት ተግባር በባሕላዊ፣ በሶሺዮኢኮኖሚ ሕይወታቸው፣ ወይም በተፈጥሮ ቅርሶቻቸው ላይ አደጋ የሚፈጥር መስሎ ከታያቸው ፈቃድ የመከልከል መብት፣

፰. የመጠቀም መብት

(፩) የአካባቢ ማኅበረሰቦች ለመኖር በሚያደርጉት እንቅስቃሴ የጄኔቲክ ሀብታቸውን ወይም የማኅበረሰብ ዕውቀታቸውን በልማዳዊ አሠራራቸውና ደንባቸው መሠረት የመጠቀም ወይም በመካከላቸው የመለዋወጥ ሊገሰስ የማይችል መብት አላቸው።

(፪) የአካባቢ ማኅበረሰቦች የጄኔቲክ ሀብትና በማኅበረሰብ ዕውቀትን የመጠቀምና የመለዋወጥ ባሕላዊ ሥርዓት ላይ የሕግ ገደብ አይደረግበትም።

፱. ጥቅም የመጋራት መብት

(፩) የአካባቢ ማኅበረሰቦች የማኅበረሰብ ዕውቀት ጥቅም ላይ በመዋሉ ከሚገኘው ገቢ ላይ የመጋራት መብት አላቸው፣

(፪) የአካባቢ ማኅበረሰቦች የጄኔቲክ ሀብታቸው ጥቅም ላይ በመዋሉ ምክንያት በዚህ አዋጅ አንቀጽ ፲፱(፩) መሠረት መንግሥት በገንዘብ መልክ ከሚያገኘው ጥቅም ላይ ፶ በመቶ ድርሻ የመጋራት መብት ይኖራቸዋል፣

(፫) በዚህ አንቀጽ ንዑስ አንቀጽ (፩) እና (፪) መሠረት የሚገኘው ገንዘብ ለሚመለከታቸው የአካባቢው ማኅበረሰቦች የጋራ ጥቅም ይውላል፤ ገንዘቡ

PROTECTION OF COMMUNITY RIGHTS

6. Principle

Local communities shall have the following rights over their genetic resources and community knowledge:

(1) The right to regulate the access to their community knowledge;

(2) The right to use their genetic resources and community knowledge;

(3) The right to share from the benefit arising out of the use of their genetic resources or community knowledge.

7. Right to Regulate Access

The right of local communities to regulate access to their community knowledge shall include the following:

(1) The right to give prior informed consent for access to their community knowledge;

(2) When exercising the right to give prior informed consent, the right to refuse consent when they believe that the intended access will be detrimental to the integrity of their cultural and socioeconomic life or natural heritages.

8. Use Right

(1) Local communities shall have an inalienable right to use or exchange among themselves their genetic resources or community knowledge in the course of sustaining their livelihood systems in accordance with their customary practices or norms.

(2) No legal restriction shall be placed on the traditional system of local communities on the use and exchange of genetic resources and community knowledge.

9. Right to Share Benefit

(1) Local communities shall have the right to share from the benefit arising out of the use of their community knowledge;

(2) Local communities shall have the right to share 50% of the monetary benefit obtained by the state out of the use of genetic resources from their locality in accordance with Article 19(1) of this Proclamation;

(3) The money obtained pursuant to Sub-Article (1) and (2) of this Article shall be put to the common advantage of the concerned local communities; the procedure that governs how such money shall be used

ለአካባቢ ማኅበረሰቦች የጋራ ጥቅም የሚውልበት ሥርዓት በዚህ አዋጅ መሠረት በሚወጣ ደንብ ይወሰናል።

፲. የማኅበረሰብ መብቶች አከባበር

(፩) የአካባቢ ማኅበረሰቦች በጂኔቲክ ሀብታቸውና የማኅበረሰብ ዕውቀታቸው ላይ ያላቸው የተንከባከቢነት ኃላፊነት በዚህ አዋጅ ዕውቅና ተሰጥቶታል፣

(፪) የአካባቢ ማኅበረሰቦች በጂኔቲክ ሀብታቸውና የማኅበረሰብ ዕውቀታቸው ላይ ያላቸው መብት በራሳቸው ልማዳዊ አሠራርና ደንቦች መሠረት ጥበቃ ይደረግለታል፣

(፫) የማኅበረሰብ ዕውቀት የሚለየው፣ የሚተረጎመውና የሚረጋገጠው በሚመለከተው የአካባቢ ማኅበረሰብ ልማዳዊ አሠራሮችና ደንቦች ነው፣

(፬) የማኅበረሰብ ዕውቀት ተመዝግቦ አለመገኘቱ በማኅበረሰብ መብትነት የሚከበር መሆኑን አያስቀርም፣

(፭) የጂኔቲክ ሀብትና የማኅበረሰብ ዕውቀት በጽሑፍ ታትሞ መውጣቱ ወይም በቃል መገለጹ ወይም የጂኔቲክ ሀብቱ በጂን ባንክ ወይም በሌላ ማንኛውም ማንበሪያ ቦታ ወይም ጥቅም ላይ ውሎ መገኘቱ በማኅበረሰብ መብትነት የሚከበር መሆኑን አያስቀርም፣

(፮) ማኅበረሰቦች የማኅበረሰብ ዕውቀታቸው ተስማሚ የሆነ የአዕምሯዊ ንብረት መብት በሕግ ይከበርላቸዋል። የሚመለከተው የአዕምሯዊ ንብረት መብት ጽሕፈት ቤትም ተገቢውን ምዝገባ በማካሄድ ለመብቶቹ ጥበቃ ያደርግላቸዋል፣

(፯) ኢንስቲትዩቱ፣ የጂኔቲክ ሀብትን ለማርከብ ፈቀድ ከመስጠቱ በፊት፣ ሀብቱ የሚገኝበትን ማኅበረሰብ አባላት አርከቦቱን በተመለከተ ማሳተፍ አለበት፤ በማኅበረሰቡም ተሳትፎ ሴቶች በሚገባ መወከላቸውን ማረጋገጥ አለበት።

for the common advantage of local communities shall be specified by a regulation to be issued under this Proclamation.

10. Protection of Community Rights

(1) The custodianship of local communities over genetic resources and their community knowledge is recognized by proclamation.

(2) The rights of local communities over their genetic resources and community knowledge shall be protected as they are enshrined in the customary practices and norms of the concerned communities.

(3) Community knowledge shall be identified, interpreted and ascertained in accordance with the customary practices and norms of the concerned local community.

(4) The non-registration of any community knowledge shall not render it unprotected by community rights.

(5) The publication or oral description of a given genetic resource or a community knowledge, or the presence of the genetic resources in gene bank or any other conservation center or that it is in use shall not affect its protection as community rights.

(6) Communities get legal recognition on a suitable community intellectual property rights over their community knowledge. The concerned Intellectual Property Office shall protect the rights by making the necessary registration.

(7) The Institute, before issuing access permit, shall ensure that the participation of local communities where the genetic resource is situated; it shall also ensure that women are adequately represented in the participation.

ክፍል ሶስት
አርከቦት ስለሚፈጸምበት ሁኔታ

PART THREE
CONDITIONS OF ACCESS

፲፩. የአርከቦት መሠረታዊ ቅድመ ሁኔታዎች

(፩) የጂኔቲክ ሀብትን ለማርከብ፣ በቅድሚያ የኢንስቲትዩቱን አስቀድሞ በመገንዘብ የሚሰጥ እሽታ ማግኘትና ከኢንስቲትዩቱ ጋር የጋራ ስምምነት ውል መመሥረት ያስፈልጋል፣

(፪) የማኅበረሰብ ዕውቀትን ለማርከብ፣ በቅድሚያ የሚመለከተውን የአካባቢ ማኅበረሰብ አስቀድሞ በመገንዘብ የሚሰጥ እሽታ ማግኘትና ከኢንስቲትዩቱ ጋር የጋራ ስምምነት ውል መመሥረት ያስፈልጋል፣

(፫) አርከቦት የሚፈጸመው በውጭ ሀገር ዜጋ በሆነ ጊዜ የጂኔቲክ ሀብት ወይም

11. Basic Preconditions of Access

(1) Access to genetic resources shall be subject to the prior informed consent of the Institute and the establishment of mutually agreed terms;

(2) Access to community knowledge shall be subject to the prior informed consent of the concerned local community and the establishment of mutually agreed terms with the Institute;

(3) In cases of access by foreigners, the collection of genetic resources or

የማኅበረሰብ ዕውቀትን መሰብሰቡ የሚከናወነው፣ የኢንስቲትዩቱ ወይም ኢንስቲትዩቱ የሚሰይመው ወይም የሚወክለው አግባብ ያለው ተቋም ባለሙያዎች በተሳታፊነት በተገኙበት መሆን አለበት፣

community knowledge shall be accompanied by the personnel of the Institute or the personnel of the relevant institutions to be designated or delegated by the Institute;

(፬) ኢንስቲትዩቱ በአርክቦት ፈቃድ መሠረት በተገኘ የጂኔቲክ ሀብት ላይ የሚካሄድ ምርምር በኢትዮጵያ ውስጥና ኢትዮጵያውያን ባለሙያዎች በሚሳተፉበት ሁኔታ እንዲካሄድ ጥረት ያደርጋል፣

(4) The Institute shall make efforts so that the research based on genetic resources accessed to be carried out in Ethiopia with the participation of Ethiopian experts;

(፭) ኢንስቲትዩቱ በዚህ አንቀጽ ንዑስ አንቀጽ ፬ መሠረት ያደረገው ጥረት ካልተሳካ፣ ምርምሩ ከኢትዮጵያ ውጪ ወይም ኢትዮጵያውያን ባለሙያዎች ሳይሳተፉ እንዲካሄድ ይፈቅዳል፣

(5) Where the Institute's efforts under sub article (4) of this Article are not successful, it shall allow researches to be conducted out of Ethiopia or without the participation of Ethiopian experts;

(፮) በአርክቦት በተገኘው የጂኔቲክ ሀብት ወይም የማኅበረሰብ ዕውቀት ላይ የሚካሄደው ምርምር ከኢትዮጵያ ውጪ እንዲካሄድ በሚፈቀድበት ጊዜ ምርምሩን የደገፈው ወይም ምርምሩ የሚካሄድበት ተቋም ኃላፊ ወይም ተወካዩ አርካቢውና ተቋሙ የአርክቦት ግዴታዎችን የሚያከብሩ ለመሆናቸው ማረጋገጫ መስጠት አለባቸው።

(6) Where the research on genetic resources or community knowledge accessed is permitted to be carried out abroad, the head or the representative of institution sponsoring or hosting the research shall give a letter of assurance that they observe the access obligations attached thereto and in accordance with this Proclamation.

፲፪. የአርክቦት ፈቃድ አስፈላጊነትና ፈቃድ ስለመስጠት

12. Requirements and Issuance of Access Permit

(፩) የዚህ አዋጅ አንቀጽ (፬) ንዑስ አንቀጽ ፪ (ሀ) ድንጋጌ እንደተጠበቀ ሆኖ ከኢንስቲትዩቱ የአርክቦት ፈቃድ የተሰጠው ካልሆነ በስተቀር ለማንኛውም ሰው የጂኔቲክ ሀብት ወይም የማኅበረሰብ ዕውቀት ማርክብ የተከለከለ ነው፣

(1) Without prejudice to the provisions of Sub-Article 2 (a) of Article 4 of this Proclamation, no person shall access genetic resources or community knowledge unless in possession of a written access permit granted by the Institute based on prior informed consent and mutually agreed terms;

(፪) በግልጽ ተለይቶ ካልተፈቀደ በስተቀር የጂኔቲክ ሀብትን ለማርክብ የተሰጠ ፈቃድ ከጂኔቲክ ሀብቱ ጋር ተያይዞ የሚገኘውንም የማኅበረሰብ ዕውቀት ለማርክብ ፈቃድ እንደተሰጠ አያስቆጥርም። በተመሳሳይ ሁኔታም፣ የማኅበረሰብ ዕውቀት ለማርክብ የተሰጠ ፈቃድ ከዕውቀቱ ጋር ተያይዞ የሚገኘውን የጂኔቲክ ሀብት ለማርክብ ፈቃድ እንደተሰጠ አያስቆጥርም፣

(2) Unless otherwise explicitly expressed, the granting of permit to access genetic resources shall not be construed to constitute permit to access the community knowledge and vice versa;

(፫) የዚህ አዋጅ አንቀጽ (፬) ንዑስ አንቀጽ ፪ (ለ) እንደተጠበቀ ሆኖ ከኢንስቲትዩቱ ፈቃድ የተሰጠው አካል ካልሆነ በስተቀር ለማንኛውም ሰው የጂኔቲክ ሀብት ከሀገር ማስወጣት የተከለከለ ነው፣

(3) Without prejudice to the provisions of Sub-Article 2 (b) of Article 4 of this Proclamation, no person shall export genetic resources out of Ethiopia unless in possession of export permit granted by the Institute to this effect;

(፬) የዚህ አዋጅ አንቀጽ (፬) ንዑስ አንቀጽ (፩) ድንጋጌ ቢኖርም የጂኔቲክ ሀብትን ለመጠበቅ በሕግ ኃላፊነት የተሰጣቸው የመንግሥት አካላት ኃላፊነታቸውን ለመወጣት ጂኔቲክ ሀብት ወይም የማኅበረሰብ ዕውቀት ለመሰብሰብ ከኢንስቲትዩቱ የአርክቦት ፈቃድ ማግኘት አያስፈልጋቸውም፣ ሆኖም ከኢንስቲትዩቱ ፈቃድ ካላገኙ በስተቀር የጂኔቲክ ሀብቱን ወይም የማኅበረሰብ ዕውቀቱን ለሌላ ሰው ማስተላለፍ ወይም ከሀገር ማስወጣት አይችሉም።

(4) Notwithstanding the provisions of Sub-Article (1) of this Article, organs of the state which are empowered by law to conserve genetic resources may not be required to obtain access permit from the Institute to collect genetic resources or community knowledge in the discharge of their duties; provided however, that they may not transfer the genetic resources or community knowledge to third persons or export same out of Ethiopia unless they are given explicit permit by the Institute;

(፭) በዚህ አንቀጽ ንዑስ አንቀጽ (፬) የተገለጹት መንግሥታዊ አካላት ሠራተኞች የጂኔቲክ ሀብት ወይም የማኅበረሰብ ዕውቀት አርክቦት በሚፈጽሙበት ጊዜ አርክቦት የሚፈጽሙ መሆናቸውን የሚገልጽ በሚሠሩበት ተቋም የተጻፈ ደብዳቤ መያዝ ይገባቸዋል፣

(፮) በዚህ አዋጅ አንቀጽ ፲፩ ንዑስ አንቀጽ ፬ እና ፭ የተደነገጉት ቅድመ ሁኔታዎች ካልተሟሉ በስተቀር ኢንስቲትዩቱ የጂኔቲክ ሀብት ከሀገር እንዲወጣ ፈቃድ አይሰጥም፣

(፯) የአርክቦት ፈቃድን ለንግድ ዓላማና ንግድ ላልሆነ ዓላማ መጠቀምን አስመልክቶ ዝርዝሩ በደንብ ይገለጻል።

(5) Employees of organs of state referred in Sub-Article (4) of this Article must carry with them a letter from their respective institutions to this effect, while accessing genetic resources or community knowledge;

(6) The Institute shall not grant permit for exporting genetic resources out of Ethiopia unless the conditions provided under Article 11 sube articles 4 and 5 of this Proclamation are met;

(7) Details on commercial and noncommercial access permit shall be determined by a regulation.

፲፫. አርክቦት የሚከለከልባቸው ሁኔታዎች

13. Conditions for Denial of Access

የሚከተሉት ሁኔታዎች በሚያጋጥሙበት ጊዜ ኢንስቲትዩቱ የአርክቦት ፈቃድ ለመከልከል ይችላል፣

The Institute may deny access to genetic resources; where:

(፩) የቀረበው የአርክቦት ጥያቄ ዝርያው የተመናመነን የጂኔቲክ ሀብት የሚመለከት ሆኖ፣ የተመናመነውን የጂኔቲክ ሀብት እንዲያገግም ለሚረዳ ምርምር ያልሆነ እንደሆነ፣

(፪) አርክቦቱ በሰው ወይም በእንስሳት ጤና ወይም በአካባቢው ማኅበረሰብ ባሕላዊ እሴት ላይ ጎጂ ተጽዕኖ የሚያስከትል ከሆነ፣

(፫) አርክቦቱ በአካባቢ ላይ ያልተፈለገ ጎጂ ተጽዕኖ የሚያስከትል ከሆነ፣

(፬) አርክቦቱ የሥርዓተ ምሕዳር መጎሳቆልን፣ መመናመንን፣ ወይም የመጥፋት አደጋን የሚያስከትል ከሆነ፣

(፭) አርክቦቱ የጂኔቲክ ሀብትን የኢትዮጵያን ብሔራዊ ሕግ ወይም ኢትዮጵያ ያፀደቀቻቸውን ዓለም አቀፍ ስምምነት ተጻራሪ ለሆነ ዓላማ ጥቅም ላይ ለማዋል ከሆነ፣

(፮) የጂኔቲክ ሀብቱ ከሀገሪቱ ባሕላዊ እሴቶች ወይም የሶሺዮኢኮኖሚ ጥቅም ጋር ልዩ ግንኙነት ካለው፣

(1) The access requested is in relation to the genetic resource of an endangered species and where the access does not relate to research for rehabilitation of the endangered species;

(2) The access may have adverse effects upon human or animal health or the cultural values of the local community;

(3) The access may cause undesirable impact on the environment;

(4) The access may cause danger of degradation, depletion or loss of ecosystem;

(5) The access is intended to use genetic resources for purposes contrary to the national laws of Ethiopia or the international treaties to which Ethiopia is a party;

(6) Where the genetic resource is of special cultural value or socioeconomic interest to the country;

፲፬. ልዩ የአርክቦት ፈቃድ

14. Special Access Permit

(፩) ኢንስቲትዩቱ በዚህ አዋጅ ውስጥ የተደነገገውን ሥርዓት በጥብቅ መከተል ሳያስፈልገው በሚከተሉት ሁኔታዎች የተለየ የአርክቦት ፈቃድ ሊሰጥ ይችላል።

(1) The Institute may, without the need to strictly follow the access procedure provided for in this Proclamation, grant special access permit:

(ሀ) ለመንግሥት የምርምርና ከፍተኛ የትምህርት ተቋማትና በኢትዮጵያ የሚገኙ የበይነ መንግሥታት ተቋማት በሀገር ውስጥ ለሚያካሄዱት የልማትና የአካዳሚ ምርምር ሥራ የጂኔቲክ ሀብትና የማኅበረሰብ ዕውቀት በቀላሉ ማግኘት እንዲችሉ፣ የተለየ የአርክቦት ፈቃድ ሊሰጣቸው ይችላል፣

(a) To Ethiopian national public research and higher learning institutions and intergovernmental institutions based in the country, so that they have facilitated access to genetic resources or community knowledge for purpose of research and development activities they undertake within the country;

(ለ) በብሔራዊ ወይም ዓለም አቀፋዊ ውሳኔዎች መሠረት በሰው፣ በእንስሳት

(b) For reversing cases of present or imminent emergencies that threaten

ወይም በዕፅዋት ጤና ላይ ግልፅ የሆነ ወይም የቀረበ አደጋን ለመቀልበስ ሲባል በተቀላጠፈ ሁኔታ የጂኔቲክ ሀብት አርክቦትን በማካሄድ የአደጋው ሰለባዎች በተመጣጣኝ ዋጋ መፍትሔ እንዲያገኙ ለማስቻል፣ እንዲሁም ከጂኔቲክ ሀብቱ መጠቀም ሚዛናዊና ተገቢ ጥቅም ተጋሪነትን ለማስገኘት፣

(ሐ) ኢትዮጵያ አባል በመሆን ያፀደቀቸውንና የባለ ብዙ ወገን ስምምነት አካል በሆነው የምግብና ዕፅዋት ጂኔቲክ ሀብት ዓለም አቀፍ ስምምነት ድንጋጌዎች መሠረት ልዩ ዓለም አቀፍ የአርክቦትና ጥቅም ተጋሪነትን ለምግብና ለግብርና ምርምር ዓላማ ሲባል፣ በዕዝል አንድ የተዘረዘሩትን የሰብልና የመኖ ዝርያዎችን ለማርከብ፣

(መ) ማናቸውንም በዕዝል አንድ ከተዘረዘሩት ውጭ የሚገኙ የሰብል እና የመኖ ዝርያዎችን የጂኔቲክ ሀብት ማርከብ በዚህ አዋጅና በሥሩ በሚወጡ ደንቦችና መመሪያዎች ድንጋጌዎች መሠረት ይካሄዳል፣

(ሠ) በዚህ አንቀጽ ንዑስ አንቀጽ (፪) መሠረት የተፈጸመ አርክቦትን ከታሰበለት ዓላማ ውጭ ለመጠቀም አዲስ የአርክቦት ፈቃድ ማግኘት ያስፈልጋል፣

(ረ) የተለየ የአርክቦት ፈቃድ የሚሰጣቸው ተቋማት አርክቦቱን በሚፈጽሙበት ጊዜ የሚኖርባቸውን ግዴታዎች ኢንስቲትዩቱ እንደአግባብነቱ ይወስናል፣

(፪) የመንግሥት የምርምርና ከፍተኛ የትምህርት ተቋማት በእጃቸው የሚገኝን የጂኔቲክ ሀብት ከእነርሱ ጋር በትብር ለሚሠሩ ከኢትዮጵያ ውጪ ለሚገኙ ተመሳሳይ ተቋማት ከ፮ ወራት ላልበለጠ ጊዜ በውሰት ሊሰጡ ይችላሉ። ሆኖም የውሰቱን ዝርዝር ሁኔታና የምርምሩን ውጤት ለኢንስቲትዩቱ ማሳወቅ አለባቸው።

or damage human, animal or plant health, as determined nationally or internationally with the view to enhancing expeditious access to genetic resources and fair and equitable sharing of benefits arising out of the use of such genetic resources, including access to affordable treatments by those in need;

(c) Access to plant genetic resources for food and agriculture under a multilateral system of International Treaty on Plant Genetic Resources for Food and Agriculture regarding food crops and forages listed under Annex I of the Treaty shall be regulated by the provisions of the Treaty;

(d) Any access to genetic resources or community knowledge for food and agriculture in relation to Non-Annex I food crops or forages shall be regulated by this Proclamation and the regulations and directives thereof;

(e) The provisions of sub article (2) and (3) of this Article need new access permit when there are changes of intent from the objectives stated therein;

(f) When the Institute grants special access permits to such institutions, it shall determine, as appropriate, the obligations they shall have while having access under such permit.

(2) Ethiopian national public research and higher learning institutions may give genetic resources under their possession to similar institutions abroad which are working in collaboration with them, by way of loan, for not more than 6 months. However, they shall submit details of the loan and results of the research to the Institute.

፲፭. ወሰን ተሻጋሪ ትብብር

15. Transboundary Cooperation

(፩) በኢትዮጵያ የግዛት ወሰንና የናጎያን ፕሮቶኮል በተቀበሉ ሌሎች ሀገሮች የግዛት ክልሎች ውስጥ ተመሳሳይ የጂኔቲክ ሀብቶች በዘቦታ በሚገኙበት ጊዜ፣ ኢንስቲትዩቱ በሚመለከታቸው አካላት ድጋፍና አስፈላጊ ሆኖ ከተገኘ የአካባቢ ማኅበረሰቦችን በማሳተፍ ይህንን አዋጅ ለማስፈጸም ከሀገራቱ ጋር በመተባበር ይሠራል፣

(1) In instances where the same genetic resources are found in situ within Ethiopian territories and in other countries which are parties to the Nagoya Protocol, the Institute, with the assistance of relevant organs, cooperates with the involvement of concerned local communities, where applicable, with a view to implementing this Proclamation;

(፪) ኢትዮጵያና የናጎያን ፕሮቶኮል በተቀበሉ ሌሎች ሀገሮች ተመሳሳይ የማኅበረሰብ ዕውቀት በሚጋሩበት ጊዜ፣ ኢንስቲትዩቱ በሚመለከታቸው አካላት ድጋፍና የአካባቢ ማኅበረሰቦችን በማሳተፍ ይህንን አዋጅ ለማስፈጸም ከሀገራቱ ጋር ለመተባበር ጥረት ያደርጋል፣

(2) Where the same community knowledge is shared by Ethiopia and other countries which are parties to the Nagoya Protocol, the Institute, with assistance of the relevant organs, shall make efforts to cooperate, with the involvement of concerned local communities, with a view to implementing this Proclamation;

(፫) የዚህን አንቀጽ ንዑስ አንቀጽ (፩) እና (፪) ድንጋጌዎችን ለማስፈጸም ኢንስቲትዩቱ የናጎያን ፕሮቶኮል ከተቀበሉ የጎረቤት ሀገሮች ጋር አላስፈላጊ ውድድር ውስጥ

(3) To implement the provisions of Sub-Articles (1) and (2) of this Article, the Institute shall make efforts to establish common access and benefit-sharing

ላለመግባት የሁኔታውን አዋጪነት በመገመት፣ ወጥ የሆነ የአርክቦትና ጥቅም ተጋሪነት ማዕቀፍን፣ አስቀድሞ በመገንዘብ የሚሰጥ እሽታን እንዲሁም የጋራ ስምምነት ውልን በትብብር ተደራድሮ ለመመሥረት የተቻለውን ጥረት ያደርጋል።

፲፮. የጋራ ስምምነት ውል ይዘት

(፩) የጋራ ስምምነት ውል የሚከተሉትን ጉዳዮች መያዝ አለበት

(ሀ) የጋራ ስምምነቱ ተዋዋይ ወገኖች ማንነት

(ለ) ለማርከብ የተፈቀደውን የጂኔቲክ ሀብት ዓይነትና መጠን

(ሐ) ለማርከብ የተፈቀደውን ወይም ለማርከብ ከተፈቀደው የጂኔቲክ ሀብት ጋር ተያይዞ የሚገኘውን የማኅበረሰብ ዕውቀት መግለጫ፣

(መ) የጂኔቲክ ሀብት ወይም የማኅበረሰብ ዕውቀት የሚሰበሰብበት አካባቢ ወይም ይህንኑ የሚያቀርበው ሰው፣

(ሠ) ለማርከብ የተፈቀደው የጂኔቲክ ሀብት ናሙና እና የማኅበረሰብ ዕውቀት መግለጫ የሚቀመጥበትን ተቋም፣

(ረ) ለማርከብ የተፈቀደው የጂኔቲክ ሀብት ወይም የማኅበረሰብ ዕውቀት ሊውል የታሰበበት አገልግሎት፣

(ሰ) የጋራ ስምምነቱ ውል በተጠቀሰው የጂኔቲክ ሀብትና የማኅበረሰብ ዕውቀት ላይ በወቅቱ ካሉ ወይም ወደፊት ከሚፈጸሙ የአርክቦት ውሎች ጋር የሚኖረው ግንኙነት ምን እንደሚሆን፣

(ሸ) የጂኔቲክ ሀብቱን በመሰብሰብ ወይም በጂኔቲክ ሀብቱ ላይ በሚደረገው ምርምር ላይ እንዲሳተፍና የጋራ ስምምነት ውሉን አፈጻጸም እንዲቆጣጠር ኢንስቲትዩቱ የወከለው አግባብት ያለው ተቋም የቱ እንደሆነ፣

(ቀ) መንግሥት ከጂኔቲክ ሀብት አርክቦቱ የሚያገኘው ጥቅም፣

(በ) የጋራ ስምምነት ውሉ የማኅበረሰብ ዕውቀት አርክቦትን የሚጨምር በሆነ ጊዜ የአካባቢ ማኅበረሰቡ ከዚሁ የሚያገኘውን ጥቅም፣

(ተ) የጋራ ስምምነት ውሉ የሚቆይበት ጊዜ፣

(ቸ) አለመግባባቶች የሚፈቱበት መንገድ፣ እና

(ኀ) የጂኔቲክ ሀብቱ ወይም የማኅበረሰብ ዕውቀት ወደ ሦስተኛ ወገኖች ስለሚተላለፍበት መንገድና ቀድሞ ከተጠቀሰው ዓላማ ለውጥ ስለሚደረግበት ሁኔታ፣

frameworks with the neighboring country parties to the Nagoya Protocol with the view to avoiding competing against each other and negotiating common prior informed consent and mutually agreed terms as far as possible and as far as feasible.

16. Contents of Mutually Agreed Terms

(1) Mutually agreed terms shall specify the following issues:

a. the identity of the parties to the agreement;

b. the type and quantitative description of the genetic resource permitted to be accessed;

c. the description of the community knowledge permitted to be accessed or with the genetic resource to be accessed;

d. the locality where the genetic resource or community knowledge is to be collected or the person providing same;

e. the institution with which the sample of the genetic resource and the description of community knowledge accessed shall be deposited;

f. the intended use of the genetic resource or the community knowledge;

g. the relation of the mutually agreed terms with existing or future mutually agreed terms on the same genetic resource or community knowledge;

h. the relevant institution designated by the Institute to participate in the collection of or the research based on the genetic resource to be accessed and be in charge of monitoring the implementation of the mutually agreed terms;

i. the benefit the state shall get from the access to genetic resources;

j. where the agreement involves access to community knowledge, the benefit the concerned local community shall obtain from the use thereof;

k. the duration of the mutually agreed terms;

l. dispute settlement mechanisms;

m. on the conditions of transfer of genetic resources or community knowledge to third parties and change of intent;

(ነ) የአርክቦት ባለፈቃዱ በዚህ አዋጅ መሠረት የሚኖሩት ግዴታዎች፣

(፪) በዚህ አንቀጽ ንዑስ አንቀጽ (ቸ) የተገለጹት አለመግባባቶች የሚፈቱባቸው መንገዶች፣ የተዋዋይ ወገኖች ፍትሕ የማግኘት መብትን ባረጋገጠ መልኩ መፈጸም ይኖርባቸዋል። እነዚህም የሚከተሉትን ያካትታሉ፣

(ሀ) ድርድር፣ ግልግል እና ሽምግልናን የመሳሰሉ አለመግባባቶች የሚፈቱባቸው አማራጭ መንገዶች፣

(ለ) የየትኛው ሀገር ፍርድ ቤትና ሕግ ተግባራዊ እንደሚሆን በግልጽ በማስቀመጥ ጉዳዩን ወደ ፍርድ ቤት መውሰድ፣

(ሐ) ተዋዋይ ወገኖች አለመግባባቶች በሚፈቱባቸው መንገዶች በግልጽ ካልተስማሙ፣ አለመግባባቶች የሚፈቱት የኢትዮጵያን ሕጎች በመጠቀም የኢትዮጵያ ፍርድ ቤቶች በሚሰጡት ውሳኔ መሠረት ይሆናል።

፲፯. ኢንስቲትዩቱ የጋራ ስምምነቱን ውል ድንጋጌዎችን መለወጥ ስለመቻሉ

(፩) የጄኔቲክ ሀብት አርክቦቱ በቀላሉ ሊመለስ የማይችል የጄኔቲክ ሀብት መመናመንን፣ የአካባቢ መራቆትን ወይም የማኅበረሰቦችን ባሕላዊ ዕሴቶች መመናመን አደጋን ያስከትላል ተብሎ ከታመነ፣ ኢንስቲትዩቱ የጋራ ስምምነት ውሉን መለወጥና የሚሰበሰበውን የጄኔቲክ ሀብት መጠን መወሰን ወይም እንደ አግባብነቱ ማናቸውንም ሌላ ገደብ ማድረግ ይችላል፣

(፪) አርክቦቱ በብዝሀ ሕይወት ሀብት ወይም በአካባቢ ላይ የውድመት አደጋ ሊያስከትል ይችላል ተብሎ ከታመነ ወይም ቅድሚያ በሚሰጣቸው የሕዝብ ጥቅሞች ላይ ጉዳት ካስከተለ ኢንስቲቲዩቱ የጋራ ስምምነት ውሉን አግዶ ወይም አቋርጦ የጄኔቲክ ሀብት ወይም የማኅበረሰብ ዕውቀት አርክቦቱ እንዳይቀጥል ሊከለክል ይችላል፣

(፫) ኢንስቲትዩቱ የጋራ ስምምነት ውሉን የመለወጥ፣ የማገድ ወይም የማቋረጥ እርምጃ ሲወስድ ውሳኔውን ለሚመለከተው የአካባቢ ማኅበረሰብና ለአርክቦት ባለፈቃዱ መግለጽ አለበት።

፲፰. የአርክቦት ባለፈቃድ ግዴታዎች

የአርክቦት ፈቃድ የተሰጠው ማንኛውም ሰው የሚከተሉት ግዴታዎች ይኖሩበታል፣

(፩) የአርክቦት ፈቃዱን ቅጂ የጄኔቲክ ሀብቱ በሚሰበሰብበት ወረዳ አግባብነት ላለው አካል የመስጠትና በተጠየቀም ጊዜ የአርክቦት ፈቃዱን የማሳየት፣

(፪) የጄኔቲክ ሀብት በሚሰበሰብበት ጊዜ የገበሬዎችን ዘር ወይም የዱር በቀል ዝርያዎችን ከምችት እንዲመናመን ያለማድረግ ወይም ከጄኔቲክ ክምችት ውስጥ ከፍተኛ መጠን ያለውን የጄኔቲክ ሀብት ተለያይነት ያለመውሰድ፣

n. the obligations the access permit holder shall have under this Proclamation;

(2) The dispute settlement mechanisms stated in Sub-Article (I) of this Article shall be made in a way that ensures the rights of parties to access justice. These may include:

a. alternative dispute resolution mechanisms such as negotiation, mediation or arbitration;

b. taking the case to a court by specifying the applicable law and jurisdiction;

c. where parties have not specified dispute settlement mechanisms, Ethiopian laws shall be applied in Ethiopian courts.

17. Power of the Institute to Alter the Provisions of Mutually Agreed Terms

(1) The Institute shall limit the amount of the genetic resource to be accessed or impose other restrictions, as appropriate, where it is recognized that the access will pose threat of genetic erosion, degradation of the environment or threat to the cultural values of communities which cannot be easily averted;

(2) Where it is recognized that the access will cause risk of damage to genetic resources or the environment or affects overriding public interest, the Institute may suspend or terminate mutually agreed terms and prohibit the access to genetic resources or community knowledge;

(3) Where the Institute decides to alter, suspend or terminate a mutually agreed terms, it shall communicate same to the concerned local community and the access permit holder.

18. Obligations of Access Permit Holder

Any person who is given an access permit shall have the following obligations:

(1) Deposit the copy of the access permit granted to him with the relevant regional institution in the district where the genetic resource is to be collected and show the access permit up on request;

(2) Not to deplete population of farmers' planting stock or wild species or to remove significant genetic variation from local gene pool during collection;

(፫) ከጥብቅ ቦታዎች የጂኔቲክ ሀብት በሚሰበስብበት ወቅት የጥብቅ ቦታዎችን አስተዳደር ደንቦችን የማክበር፣

(፬) የተሰበሰበውን የጂኔቲክ ሀብት ናሙና፣ አሰባሰብ መረጃና የማኅበረሰብ ዕውቀት መግለጫን በኢንስቲትዩቱ ወይም ኢንስቲትዩቱ በሚሰይመው አግባብነት ያለው ተቋም ዘንድ እንዲቀመጥ የማድረግ፣

(፭) ለማርከብ ከተፈቀደለት የጂኔቲክ ሀብት ዓይነትና መጠን ያለማለፍ፣

(፮) ኢንስቲትዩቱ ሲጠይቀው በአርከቦት ከወሰደው የጂኔቲክ ሀብት ላይ ናሙና እና የማኅበረሰብ ዕውቀት ቅጂ የመስጠት፣

(፯) ምርምሩ ስለሚገኝበት ደረጃ በመደበኛ ሁኔታ ለኢንስቲትዩቱ ሪፖርት የማቅረብና የጂኔቲክ ሀብት በተደጋጋሚ የሚሰበስብ ከሆነ ስለሚደርሰው የአካባቢ፣ የማኅበራዊና ኢኮኖሚያዊ ተፅዕኖ በመከታተል ለኢንስቲትዩቱ ሪፖርት የማቅረብ፣

(፰) ከምርምሩ የተገኙ ውጤቶችንና የተወሰደው የጂኔቲክ ሀብት ከምን እንደደረሰ ለኢንስቲትዩቱ በጽሑፍ ማሳወቅ፣

(፱) ለኢንስቲትዩቱ አሳውቆ በጽሑፍ ፈቃድ ሳያገኝ በአርከቦት የተገኘን የጂኔቲክ ሀብት ወይም ማኅበረሰብ ዕወቀት ለሌላ ሦስተኛ ወገን አሳልፎ ያለመስጠት ወይም እንዲውል ከተፈቀደው የአገልግሎት ዓላማ ውጪ ለሆነ ጉዳይ ያለመጠቀም፣

(፲) የታቀደው ምርምር ወይም የጋራ ስምምነት ውሉ ሲቋረጥ በጥቅም ላይ ያልዋለውን የጂኔቲክ ሀብት ለኢንስቲትዩቱ የመመለስ፣

(፲፩) ለኢንስቲትዩቱ አሳውቆ በጽሑፍ ፈቃድ ሳያገኝ የአርከቦት ፈቃዱን ወይም ከፈቃዱ የሚመነጨውን መብትና ግዴታ ለሦስተኛ ወገን ያለማስተላለፍ፣

(፲፪) በአርከቦት በተገኘው የጂኔቲክ ሀብት ወይም የጂኔቲክ ሀብቱ አካል በሆነ ነገር ላይ ማንኛውም የአዕምሯዊ ንብረት መብት ለማግኘት ሲፈልግ አግባብ ያለው የኢትዮጵያ ሕግ በሚፈቅደው መሠረት ለአዕምሯዊ ንብረት መብት ጽ/ቤት ያመለክታል። ይህንንም ለኢንስቲትዩቱ ያሳውቃል፣

(፲፫) በአርከቦት የተገኘውን ጄኔቲክ ሀብት ወይም የማኅበረሰብ ዕውቀት በመጠቀም ለተገኘ የምርት ውጤት የአዕምሯዊ ንብረት ጥበቃ ለማግኘት በሚቀርብ ማመልከቻ ውስጥ የጂኔቲክ ሀብቱ ወይም የማኅበረሰብ ዕውቀቱ የተገኘበትን አካባቢ በምንጭነት የመጥቀስ፣

(፲፬) በአርከቦት የተገኘ የጂኔቲክ ሀብትን ወይም የማኅበረሰብ ዕውቀትን በመጠቀም ከሚገኘው ገቢ ላይ ለመንግሥትና ለሚመለከተው የአካባቢ ማኅበረሰብ የማጋራት፣

(3) Where the genetic resource is to be collected from protected areas, to observe the rules and regulations of the administration of the protected area;

(4) Deposit the sample of the genetic resources collected and the collection data, and the description of community knowledge accessed with the Institute or the relevant institution the Institute may designate;

(5) Observe the type and quantitative limits of the genetic resource permitted to be accessed;

(6) Upon request, supply to the Institute a sample from the genetic resource and copy of the description of the community knowledge accessed;

(7) Submit to the Institute regular status reports of the research and development, and where genetic resource is to be collected repeatedly, follow up the environmental and socio-economic impact of the access and submit a report thereon;

(8) Inform the Institute in writing of all the findings of the research and development based on the genetic resource and community knowledge accessed;

(9) Refrain from transferring the genetic resource and the community knowledge accessed to third parties or use same for any purpose other than that originally intended, without first notifying to and obtaining written authorization from the Institute;

(10) Return any unused genetic material at the end of the planned research or upon termination of the mutually agreed terms;

(11) Refrain from transferring the access permit to third parties or the rights and obligations thereunder without obtaining the consent of the Institute to that effect;

(12) Where the user seeks to acquire intellectual property right over the genetic resources accessed or parts thereof, he shall apply to the Intellectual Property Office, based on the relevant laws of Ethiopia. He shall also notify this to the Institute;

(13) Recognize the locality where the genetic resource or community knowledge accessed from as origin in the application for commercial property protection of the product developed there from;

(14) Share the benefit that may be obtained from the use of the genetic resource or community knowledge accessed to the state and the concerned local communities;

(፲፫) የሀገሪቱን ሕጎች በተለይም የጤና፣ የደህንነተ-ሕይወትና የአካባቢ ጥበቃን በሚመለከት የወጡ ሕጎችን የማክበር

(፲፬) የአካባቢ ማኅበረሰቦችን ልማዳዊ አሠራሮች፣ ባሕላዊ ዕሴቶችንና ደንባቸውን የማክበር፣

(፲፭) የጋራ ስምምነት ውሉን ግዴታዎች የማክበር፣

(፲፮) ሌሎች ኢንስቲትዩቱ የሚወስናቸውን ግዴታዎች የማክበር

፲፱. ጥቅም መጋራት

(፩) በአርክቦት የተገኘ የጄኔቲክ ሀብትን ወይም የማኅበረሰብ ዕውቀትን በመጠቀም ከሚገኘው ገቢ ላይ መንግሥትና የአካባቢ ማኅበረሰቦች የሚጋሩት የጥቅም ዓይነትና መጠን በሚፈረመው በእያንዳንዱ የአርክቦት ስምምነት የሚወሰን ይሆናል፣

(፪) በገንዘብ መልክ ከሚገኘው ጥቅም ላይ በዚህ አዋጅ አንቀጽ ፱ (፪) የተመለከተው የአካባቢው ማኅበረሰብ ድርሻ ከተቀነሰ በኋላ የሚቀረው ገንዘብ የጄኔቲክ ሀብትን ለመንከባከብና ለማበልፀግ እንዲሁም የማኅበረሰብ ዕውቀትን ለማስፋፋት ተግባር ይውላል። ገንዘቡ ለዚህ ተግባር የሚውልበት ሁኔታ ኢንስቲትዩቱ በሚያወጣው መመሪያ ይወሰናል፣

(፫) በመንግሥትና በሚመለከተው የአካባቢ ማኅበረሰብ መካከል የሚኖረው በገንዘብ ያልሆነ የጥቅም መጋራት ከአርክቦት ባለፈቃዱ ጋር በሚደረገው የጥቅም ክፍፍል ላይ ተመሥርቶ በሚፈረመው የጋራ ስምምነት ውል ውስጥ ይገለጻል።

፳. የጥቅም ዓይነቶች

የጄኔቲክ ሀብት ወይም የማኅበረሰብ ዕውቀትን ከማርከብ ሊገኝ የሚችለው ጥቅም መጋራት በገንዘብ ወይም ገንዘብ ነክ ባልሆኑ ጥቅሞች ሊሆን ይችላል፣

(፩) ገንዘብ ነክ የጥቅም ዓይነቶች ከዚህ በታች በተዘረዘሩት ብቻ ሳይወሰኑ የሚከተሉትን ያካትታሉ

(ሀ) የአርክቦት ክፍያ፣

(ለ) የቅድሚያ ክፍያ፣

(ሐ) በየደረጃው የሚደረግ ክፍያ፣

(መ) ሮያልቲ፣

(ሠ) አርክቦቱ ለንግድ ሲሆን የፈቃድ ክፍያ፣

(ረ) ብዝሀ ሕይወትን ለማንበርና ዘላቂነት ባለው ሁኔታ መጠቀምን ለሚያስችል የበጎ አድራጎት ፈንድ የሚደረግ ልዩ የገንዘብ መዋጮ፣

(ሰ) ለምርምር የሚውል የገንዘብ ክፍያ፣

(፪) ገንዘብ ነክ ያልሆኑ የጥቅም ዓይነቶች ከዚህ በታች በተዘረዘሩት ብቻ ሳይወሰኑ የሚከተሉትን ያካትታሉ

(15) Respect the laws of the country, particularly those relating to sanitary control, biosafety and protection of the environment;

(16) Respect the customary practices, cultural values and rules of local communities;

(17) Observe the terms and conditions of the mutually agreed terms;

(18) Other obligations as determined by the Institute.

19. Benefit-Sharing

(1) The kind and the amount of the benefit to be shared by the state and local communities from access to genetic resources or community knowledge shall be determined case by case in each specific mutually agreed terms to be signed;

(2) The remaining portion of the monetary benefit from access to genetic resources, after deducting the share of the local community as determined pursuant to Article 9 (2) of this Proclamation, shall be allocated for conservation of biodiversity and the promotion of community knowledge. The conditions governing how the money shall be put to such use shall be specified by guidelines to be issued by the Institute.

(3) The sharing of nonmonetary benefits from access to genetic resources among the state and the concerned local community shall be specified in each specific mutually agreed terms taking into account the kinds of benefits agreed to share with the access permit holder.

20. Types of Benefit

The benefit to be shared from an access to genetic resources or community knowledge may be monetary or nonmonetary benefits.

(1) Monetary benefits may include, but not be limited to:

a. Access fee;
b. Up-front payments;
c. Milestone payments;
d. Payment of royalties;
e. License fees in case of commercialization
f. Special monetary contribution to be paid to trust funds supporting conservation and sustainable use of biodiversity;
g. Research funding;

(2) Nonmonetary benefits may include, but not limited to:

(ሀ) የምርምርና የልማት ሥራ ውጤቶችን መጋራት፣

(ለ) በአርከቦት በተገኘው የጂኔቲክ ሀብት ወይም የማኅበረሰብ ዕውቀት ላይ በሚደረገው ምርምር በኢንስቲትዩቱ ወይም አግባብነት ባለው ተቋም ውስጥ የሚሰሩ ኢትዮጵያውያን ባለሙያዎች መሳተፍ፣

(ሐ) የሥራ ዕድል ቅድሚያ የማግኘት፣

(መ) የጂኔቲክ ሀብቱን በመጠቀም ምርት ለማምረት የሚያስፈልገውን የጂኔቲክ ሀብት ጥሬ ዕቃ ለማቅረብ ቅድሚያ የማግኘት፣

(ሠ) በጋግድ ሥራ ባለድርሻ የመሆን፣

(ረ) የአዕምሯዊ ንብረት የጋራ ባለቤት መሆን፣

(ሰ) በትምህርትና ሥልጠና መስክ ድጋፍና ትብብር የማግኘት፣

(ሸ) በኢዘቦታ የሚገኙ የጂኔቲክ ሀብቶችንና የመረጃ ክምችቶችን የመውሰድ፣

(ቀ) የጂኔቲክ ሀብትን ወይም የማኅበረሰብ ዕውቀትን በመጠቀም የሚገኙ ምርቶችንና ቴክኖሎጂዎችን ቅድሚያ የማግኘት፣

(በ) የአርከቦትና ጥቅም ተጋሪነት ሕግን ለመተግበር የሚደረጉትን የቴክኖሎጂ ሽግግሮች ለመጠቀም የሚያስችሉ ተቋማዊ፣ የሰውና ቁሳቁስ የአቅም ግንባታ ድጋፎችን የማግኘት፣

(ተ) የጂኔቲክ ሀብትን የመጠበቅ፣ የመገምገም፣ የማበልፀግ፣ የማራባትና የመጠቀም ችሎታን ለማዳበር በተቋምና በአካባቢ ማኅበረሰብ ደረጃ ሥልጠናን የማግኘት፣

(ቸ) የማስተዋወቅና የመሳሰሉትን ማኅበራዊ ዕውቅና የማግኘት።

ክፍል አራት

ሕግ ማክበርና የቁጥጥር እርምጃዎች

፳፩. የአርከቦትና የጥቅም ተጋሪነት ሕጎችን፣ የጋራ ስምምነት ውሎችንና አስቀድሞ በመገንዘብ የሚሰጥ እሽታ ሥነ-ሥርዓቶችን ማክበር

(፩) ማንኛውም የጂኔቲክ ሀብት ወይም የማኅበረሰብ ዕውቀት የሚጠቀም ሰው በእጁ ላይ የሚገኘውን የጂኔቲክ ሀብት ወይም የማኅበረሰብ ዕውቀት በሰጪው ሀገር የአርከቦትና የጥቅም ተጋሪነት ሕጎች፣ ደንቦችና መሥፈርቶች መሠረት አርከቦት መፈጸሙን ለኢንስቲትዩቱ ወይም እንደ አግባብነቱ፣ በኢንስቲትዩቱ ወይም በሌላ የሀገሪቱ ሕግ ለተሰየመ የቁጥጥር ተቋም ሰነዶችን በማቅረብ ማሳወቅና ማረጋገጥ ይኖርበታል። እነዚህ ሰነዶች በሰጪው ሀገር ሕግ መሠረት አስቀድሞ በመገንዘብ የሚሰጥ እሽታ መሰጠቱንና የጋራ ስምምነት ውል

a. Sharing of research and development results;

b. Participation of Ethiopian nationals from the Institute or the relevant institutions in the research and product development based on the genetic resources or community knowledge accessed;

c. Employment opportunities with preferential terms;

d. Priority to supply the raw material of genetic resource required for producing products there form;

e. Joint ventures; and

f. Joint ownership of intellectual property rights.

g. Collaboration, cooperation and contribution in education and training;

h. Admittance to ex situ facilities of genetic resources and to databases;

i. Access to products and technologies developed from the use of genetic resources or community knowledge accessed, in preferential terms;

j. Strengthening capacities for technology transfer, institutional, human and material resources for the administration and enforcement of access and benefit sharing laws;

k. Training, both at institutional and local communities levels, to enhance local skills in genetic resources conservation, evaluation, development, propagation and use;

l. Social recognition such as the use of promotional terms and expressions.

PART FOUR

COMPLIANCE AND MONITORING MEASURES

21. Compliance with Access and Benefit-Sharing Laws, Mutually Agreed Terms and Prior Informed Consent Procedures

(1) Users of genetic resources or community knowledge shall declare and ascertain to the Institute or the checkpoints designated by this Proclamation or by any other law of the country, as appropriate, that the genetic resources or community knowledge they use have been accessed in accordance with the applicable access and benefit-sharing legislation or regulatory requirements of the provider country by producing the necessary documents. Such documents shall clearly indicate that the prior

መመሥረቱን በግልፅ ማመልከት አለባቸው።

(፪) የጂኔቲክ ሀብት ወይም የማኅበረሰብ ዕውቀት ተጠቃሚው፣ በዚህ አንቀጽ ንዑስ አንቀጽ (፩) ላይ የተገለጹትን መሥፈርቶች ካላሟላ፣ አጠራጣሪ ወይም የተሳሳተ መረጃ ካቀረበ፣ ኢንስቲትዩቱ፣

(ሀ) ለተጠቃሚው የጽሑፍ ማስጠንቀቂያ በመስጠት በዚህ አንቀጽ ንዑስ አንቀጽ (፩) ላይ የተገለጹትን መሥፈርቶች እንዲያሟላ ትዕዛዝ ይሰጠዋል፣

(ለ) በተጠቃሚው ላይ የወሰደውን እርምጃ ለሰጪው ሀገር የሚመለከተው ተቋምና ለአርክቦትና ጥቅም ተጋሪነት የመረጃ ሥርዓት ያሳውቃል፣

(፫) ተጠቃሚው የኢንስቲትዩቱን ትዕዛዝ በዚህ አንቀጽ ንዑስ አንቀጽ ፪ (ሀ) መሠረት እስኪያሟላ ድረስ ኢንስቲትዩቱ፣

(ሀ) በተጠቃሚው ወይም በሌላ ሦስተኛ ወገን እጅ የሚገኝን የጂኔቲክ ሀብትንና ሀብቱን መጠቀም የሚያስችሉ መሣሪያዎችን በኤግዚቢትነት ይይዛል፣

(ለ) በኢትዮጵያ ውስጥ የጂኔቲክ ሀብት ወይም የማኅበረሰብ ዕውቀት አርክቦት እንዳይፈጽም ያግዳል፣

(ሐ) የወሰዳቸውን እርምጃዎች ለሰጪው ሀገር የሚመለከተው ተቋም እና ለአርክቦትና ጥቅም ተጋሪነት የመረጃ ሥርዓት ያሳውቃል፣

(መ) እንዳስፈላጊነቱ ተጠቃሚው ያደረጋቸውን የሕግ ጥሰቶች ለብዙኃን መገናኛዎች ሊያሳውቅ ይችላል፣

(፬) የጂኔቲክ ሀብት ተጠቃሚዎችና አስመጪዎች የጂኔቲክ ሀብቱ ሰጪ ሀገር የሀብቱ መነሻ ካልሆነ፣ ጂኔቲክ ሀብቱ የመነጨበትን ሀገር በግልጽ ማመልከት አለባቸው።

፳፪. የጋራ ስምምነት ውል ድንጋጌዎችን ማክበር

ኢንስቲትዩቱ፣ በሰጪው ሀገርና በተጠቃሚው መካከል የተመሠረተው የጋራ ስምምነት ውል በተጠቃሚው መጣሱን ሲደርስበት፣ በሰጪው ሀገር ሕግ መሠረት አለመግባባቶች የሚፈቱበትን መንገድ ያመቻቻል።

፳፫. የጂኔቲክ ሀብትንና የማኅበረሰብ ዕውቀት አጠቃቀምን በተመለከተ የሚደረግ ክትትልና ቁጥጥር

(፩) ኢንስቲትዩቱ በሰጪው ሀገርና በተጠቃሚው መካከል የተመሠረተውን የጋራ

informed consent is obtained and mutually agreed terms are established in accordance with the access and benefit-sharing rules of the provider country;

(2) When users are unable to meet the requirements specified under sub article (1) of this Article, or the information in their possession is insufficient, uncertain, or wrong:

a. The Institute shall issue a written warning to the user and order the user to fulfill the requirements specified under sub article (1) of this Article;

b. The Institute shall report the measures it took against the user to the concerned institution of the provider country and the Access and Benefit-Sharing Clearing House;

(3) Until the user fulfills the requirements as per the order of the Institute under sub-Article 2(a) of this Article, the Institute shall

a. hold as exhibit the genetic resources in the hands of the user or of third party and the equipment owned by the user for use of genetic resources;

b. order a ban from access to genetic resources or community knowledge in Ethiopia;

c. report the measures it took against the user to the concerned institution of the provider country and the Access and Benefit-Sharing Clearing House;

d. report the defaults of the user, as appropriate, to the media;

(4) Users and importers of genetic resource shall specifically indicate the country of origin of the genetic resources in case the provider country is not the origin of the genetic resources.

22. Compliance with Provisions of Mutually Agreed Terms

When breach of the provisions of mutually agreed terms of the provider country by users is brought to the attention of the Institute, it shall facilitate mechanisms for dispute resolution between the user and the provider country based on the dispute settlement rules of the access and benefit-sharing laws of that country.

23. Monitoring and Controlling the Use of Genetic Resources and Community Knowledge

(1) The Institute shall monitor the execution of mutually agreed terms of the

ስምምነት ውል በሚከተሉት መንገዶች ይከታተላል፣

(ሀ) የቁጥጥር ተቋማትን በመሰየም፣

(ለ) ፍተሻ በማካሄድ፣

(ሐ) የአርክቦት ባለፈቃዱ ሥራው የደረሰበትን ሁኔታ በየጊዜው ከሚያሳውቅባቸው ሪፖርቶች፣

(መ) ከማንኛውም ሰው ከሚገኝ ጥቆማ፣

(ሠ) ከአርክቦትና ጥቅም ተጋሪነት የመረጃ ሥርዓትና ዓለም አቀፍ ዕውቅናን ካገኘ የሕግ ማክበር የምስክር ወረቀት፣

(ረ) አስቀድሞ በመገንዘብ የሚሰጥ እሽታ መገኘትን፣ የጋራ ስምምነት ውል መመሥረትን ወይም የጂኔቲክ ሀብትን ወይም የማኅበረሰብ ዕውቀት ምንጮችን፣ ወይም የማኅበረሰብ ዕውቀትን መጠቀምን አስመልክቶ መረጃን እንዲሰበስቡ ወይም እንዲቀበሉ ከተሰየሙ የቁጥጥር ተቋማት፣ እና

(ሰ) ከማንኛውም አግባብነት ካለው ምንጭ በሚገኝ መረጃ።

(፪) በጂኔቲክ ሀብት አሰባሰብና በምርምር ላይ እንዲሳተፉና የጋራ ስምምነት ውል አፈጻጸምን እንዲቆጣጠሩ የተሰየሙ አግባብነት ያላቸው ተቋማት በተከናወነው የአሰባሰብና የምርምር እንቅስቃሴ በተገኘው ግኝትና በጋራ ስምምነቱ አፈጻጸም ላይ በየወቅቱ ሪፖርት ለኢንስቲትዩቱ መስጠት ይኖርባቸዋል።

(፫) ኢንስቲትዩቱ አርክቦት በተፈጸመበት የማኅበረሰብ ዕውቀት ላይ የተካሄደው ምርምር የደረሰበትን ደረጃና የተገኘውን ውጤት የማኅበረሰብ ዕውቀቱን አጠቃቀምና የተገኘውን የጥቅም መጋራት በተመለከተ ለሚመለከተው የአካባቢ ማኅበረሰብ መረጃ መስጠት ይኖርበታል።

(፬) ኢንስቲትዩቱ የተጠቃሚውን ሕግ ማክበር አስመልክቶ ከቁጥጥር ተቋማት ወይም ከሌሎች ምንጮች ያገኛቸውን መረጃዎች ለአርክቦትና የጥቅም ተጋሪነት የመረጃ ሥርዓት ማጋራት ይኖርበታል።

ክፍል አምስት

የቁጥጥር ተቋማትን ስለመሰየምና ኃላፊነቶቻቸው

፳፬. የቁጥጥር ተቋማትን መሰየም

(፩) በኢትዮጵያ ውስጥ የጂኔቲክ ሀብት አጠቃቀም ለመከታተል የሚከተሉት ተቋማት በዚህ አዋጅ ተሰይመዋል፣

(ሀ) የአዕምሯዊ ንብረት ሙቦት ጽ/ቤት

(ለ) የምርምር ሥራን በገንዘብ የሚረዱ ወይም አሳታሚ ድርጅቶች

(ሐ) የምርምርና የትምህርት ተቋማት

provider country through the following mechanisms:

a. designation of checkpoints;
b. inspection;
c. periodic progress and status reports by access permit holders;
d. a report by any person;
e. information from Access and Benefit-Sharing Clearing House and internationally recognized certificates of compliance;
f. information from checkpoints designated to collect or receive relevant information related to prior informed consent, the establishment of mutually agreed terms, the source of the genetic resource or community knowledge, or the use of genetic resources or community knowledge; and
g. information obtained from any other mechanism deemed appropriate.

(2) The access permit holder and the relevant institutions designated to take part in the collection of and research based on genetic resources and to monitor the implementation of mutually agreed terms shall give periodic reports to the Institute on the collection conducted, the progress of the research and the findings therefrom.

(3) The Institute shall inform the concerned local communities of the progress of the research and the findings thereof, the use of community knowledge and the benefit shared therefrom.

(4) The Institute shall share the information it got from the checkpoints or from other sources on the user compliance to the Access and Benefit-Sharing Clearing Houses.

PART FIVE

DESIGNATION AND RESPONSIBILITIES OF CHECKPOINTS

24. Designation of Checkpoints

(1) The following are designated by this Proclamation as checkpoints to monitor the use of genetic resources in Ethiopia

a. Intellectual property right office
b. Research funding or publishing institutions
c. Research and educational institutions

(መ) የኳራንቲን ተቆጣጣሪ ተቋማት

(ሠ) የጉምሩክ ባለሥልጣን

(ረ) የመልዕክት አስተላላፊ ድርጅቶች

(ሰ) የምግብ፣ የመድኃኒትና ጤና ክብካቤ አስተዳደርና ቁጥጥር ባለሥልጣን

(፪) አስፈላጊ ሆኖ ሲያገኘው፣ ኢንስቲትዩቱ ሌሎች የቁጥጥር ተቋማትን ለመንግሥት አቅርቦ ሊያሰይም ይችላል።

(፫) የእያንዳንዱ የቁጥጥር ተቋም ልዩ ኃላፊነት እንደተጠበቀ ሆኖ አጠቃላይ የቁጥጥር ተቋማት ኃላፊነቶች የሚከተሉትን ያካትታሉ፣

(ሀ) ከጂኔቲክ ሀብት ወይም የማኅበረሰብ ዕውቀት ተጠቃሚዎች ላይ የጂኔቲክ ሀብት ወይም የማኅበረሰብ ዕውቀት ምንጮችን፣ አስቀድሞ በመገንዘብ የሚሰጥ እሽታ ስለመገኘቱ፣ የጋራ ስምምነት ውል ስለመመሥረቱ፣ እንዲሁም የጂኔቲክ ሀብት አጠቃቀምን በተመለከተ፣ እንደ ነገሩ ሁኔታ መረጃዎችን መሰብሰብ ወይም መቀበል፣

(ለ) የጂኔቲክ ሀብት ወይም የማኅበረሰብ ዕውቀት ተጠቃሚዎች የዚህን አንቀጽ ንዑስ አንቀጽ ፫ (ሀ) ድንጋጌዎችን ሳያሟሉ ከቀሩ ያቀረቧቸውን ሰነዶች፣ የጂኔቲክ ሀብቶችንና መሣሪያዎችን በሙሉ መያዝና ለኢንስቲትዩቱ ማስረከብ፣

(ሐ) ዝርዝር አፈጻጸማቸውን ለኢንስቲትዩቱ ሪፖርት ማቅረብ።

፳፭. የአዕምሯዊ ንብረት መብት ጽ/ቤት ኃላፊነቶች

(፩) የጂኔቲክ ሀብትን ወይም የማኅበረሰብ ዕውቀትን በመጠቀም በተገኘ ውጤት ላይ የአዕምሯዊ ንብረት መብት ከመስጠቱ በፊት ተጠቃሚው የሚከተሉትን ማቅረቡን ማረጋገጥ አለበት፣

(ሀ) ዓለም አቀፍ ዕውቅናን ካገኘ የሕግ ማክበር የምስክር ወረቀት፣

(ለ) ዓለም አቀፍ ዕውቅናን ካገኘ የሕግ ማክበር የምስክር ወረቀት ካልተገኘ የአርክቦት ፈቃድ እና የጋራ ስምምነት ውል ከእነ ጥቅም ተጋሪነት ዝርዝር ሁኔታዎች ጋር፣

(፪) ለአዕምሯዊ ንብረት መብት ጥበቃ የሚቀርብ ማመልከቻ የጂኔቲክ ሀብት ወይም የማኅበረሰብ ዕውቀት ምንጭ እንዲሁም የጂኔቲክ ሀብት ወይም የማኅበረሰብ ዕውቀት የትና በምን ሁኔታ ጥቅም ላይ እንደሚውል በግልፅ ማሳየት አለበት፣

(፫) ከጂኔቲክ ሀብት ወይም ከማኅበረሰብ ዕውቀት ጋር የተያያዘ ለአዕምሯዊ ንብረት መብት ጥበቃ የቀረበ ጥያቄ በሕዝብ ማስታወቂያ ሲወጣ፣ የማስታወቂያውን ይዘትና የሚቆይበትን ጊዜ ለኢንስቲትዩቱ ማሳወቅ።

(፬) የማኅበረሰብ ዕውቀት መብት ለማስከበር ልዩ የአዕምሯዊ ንብረት መብት ጥበቃ

d. Quarantine control institutions

e. Customs authorities

f. Mail service institutions

g. Food, Medicine and Health Care Administration and Control Authority

(2) Other checkpoints may be designated by Government upon nomination by the Institute if it finds necessary.

(3) Without prejudice to the specific responsibilities of individual checkpoints in this Proclamation, their general responsibilities include:

a. collecting or receiving, as appropriate, relevant information related to prior informed consent, the sources of the genetic resources or community knowledge, establishment of mutually agreed terms, or the use of genetic resources from users of genetic resources or community knowledge;

b. where users of genetic resource or community knowledge fail to fulfill the provisions of sub article 3 (a) of this Article, seizing all documents, genetic resources and equipment and transfer to the Institute; and

c. reporting to the Institute details of their performances.

25. Responsibilities of Intellectual Property Right Office

(1) Before they issue an intellectual property right protection over the product developed from genetic resources or community knowledge accessed, shall ensure that the user has produced:

a. Internationally recognized certificate of compliance;

b. Where internationally recognized certificate of compliance is not available, information and relevant documents on access permits and mutually agreed terms, including benefit-sharing arrangements;

(2) Application for intellectual property right shall disclose the origin or source of the genetic resource or community knowledge, where and how the use of genetic resources and community knowledge to be conducted;

(3) When a public notice for intellectual property right protection over genetic resources of community knowledge is posted on a public notice, giving details, on the contents and for how long such notice remains posted, to the Institute;

(4) Facilitating conditions for the introduction of the special intellectual

የሆነው የሱይ ጀነሪስ ሥርዓት በተግባር ላይ የሚውልበትን መንገድ ማመቻቸት።

property right system of sui generis to protect community knowledge.

፳፮. የምርምር ሥራን በገንዘብ የሚደግፉ እና የአሳታሚ ተቋማት ኃላፊነቶች

26. Responsibilities of Research Funding and Publishing Institutions

(፩) በጂኔቲክ ሀብት ወይም በማኅበረሰብ ዕውቀት ላይ የሚደረጉ የምርምር ሥራዎችን በገንዘብም ሆነ በሌላ ማንኛውም መልኩ ድጋፍ የሚሰጡ ተቋማት ድጋፋቸውን ከመስጠታቸው በፊት ተመራማሪው የጂኔቲክ ሀብቱ ወይም የማኅበረሰብ ዕውቀቱ የተገኘበት ሀገር የአርክቦትና የጥቅም ተጋሪነት ሕጎች መሠረት አርክቦት መፈጸሙን ማረጋገጥ ይኖርባቸዋል፣

(1) Research funding institutions, before granting fund or other supports for research works on genetic resources or community knowledge shall ensure that the researcher has accessed the genetic resource or community knowledge according to the access and benefit-sharing laws of the providing country;

(፪) በጂኔቲክ ሀብት ወይም በማኅበረሰብ ዕውቀት ላይ የሚደረጉ የምርምር ውጤቶችን የሚያሳትሙ ተቋማት ሕትመት ከማካሄዳቸው በፊት የጂኔቲክ ሀብቱ ወይም የማኅበረሰብ ዕውቀቱ የተገኘበት ሀገር የአርክቦትና የጥቅም ተጋሪነት ሕጎች መሠረት አርክቦታቸው መፈጸሙን ማረጋገጥ ይኖርባቸዋል፣

(2) Research publishing institutions, before publishing research results on genetic resource or community knowledge shall ensure that the research has fulfilled the access and benefit-sharing laws of the providing country.

፳፯. የምርምርና የትምህርት ተቋማት ኃላፊነቶች

27. Responsibilities of Research and Educational Institutions

የምርምር ወይም የትምህርት ተቋማት ከጂኔቲክ ሀብት ወይም ከማኅበረሰብ ዕውቀት ጋር ግንኙነት ያለቸውን የምርምር ርዕሶች ወይም የምርምር ንድፎች ሲቀበሉ የጂኔቲክ ሀብቱ ወይም የማኅበረሰብ ዕውቀቱ የተገኘበት ሀገር የአርክቦትና የጥቅም ተጋሪነት ሕጎች መሠረት አርክቦታቸው መፈጸሙን ማረጋገጥ ይኖርባቸዋል።

Research or educational institutions when receiving research topics or proposals related with genetic resources or community knowledge shall ensure that the researcher has fulfilled the access and benefit-sharing laws of the providing country.

፳፰. የኳራንቲን ተቆጣጣሪ ተቋማት ኃላፊነቶች

28. Responsibilities of Quarantine Control Institutions

የኳራንቲን ተቆጣጣሪ ተቋማት ለሕይወታዊ ሀብት የሚሰጡት የኳራንቲን ሰርተፊኬት በሕይወታዊ ሀብቱ ውስጥ የሚገኝን የጂኔቲክ ሀብት ለመጠቀም የሚያስችል ፈቃድ አለመሆኑንና በኳራንቲን ሰርተፊኬቱ ብቻ በሕይወታዊ ሀብቱ ውስጥ የሚገኝን የጂኔቲክ ሀብት መጠቀም የተከለከለና ወንጀል መሆኑን የሚገልጽ ቃል እንዲይዝ ማደረግ አለባቸው።

Quarantine control Institution shall ensure that the quarantine certificate they issue to biological resource contain a statement indicating that the certificate does not constitute a permit to use genetic resource contained in the biological resource and that doing so is prohibited and would constitute an offence.

፳፱. የጉምሩክ ባለሥልጣን ኃላፊነት

29. Responsibilities of Customs Office

የጉምሩክ ባለሥልጣን

Customs officers shall

(፩) ከሀገሪቱ የሚወጣ የጂኔቲክ ሀብት የመውጫ ፈቃድ ከኢንስቲትዩቱ የተሰጠበት መሆኑን የመቆጣጠር፣ እንዲሁም ማንኛውም የጂኔቲክ ሀብትን ወደ ሀገር ውስጥ የሚያስገባ ሰው፣ ከኢንስቲትዩቱ የተሰጠውን ሀብቱን ወደ ሀገር ውስጥ የማስገቢያ ፈቃድ እንዲያሳይ የመጠየቅ፣

(1) Inspect that genetic resources being taken out of the country have been accompanied with an export permit given by the Institute and require any person entering into Ethiopia, who is in possession of genetic resource to produce the necessary import permit given by the Institute;

(፪) የጂኔቲክ ሀብት የሚያጓጉዝ ወይም የያዘ ከሀገር የሚወጣ ማንኛውም ሰው ከኢንስቲትዩቱ የተሰጠውን የጂኔቲክ ሀብት ከሀገር የማስወጫ ፈቃድ እንዲያሳይ የመጠየቅ፣

(2) Require any person leaving the country who is transporting or is in possession of genetic resources to produce the necessary permit to this effect from the Institute;

(፫) አስፈላጊው ፈቃድ ሳይኖር ከሀገር በመውጣት ላይ የሚገኝ የጂኔቲክ ሀብትንና የጂኔቲክ ሀብቱን ከሀገር በማስወጣት ላይ የሚገኝን ሰው መያዝና ወዲያውኑ በአካባቢው ለሚገኝ አግባብነት ላለው አካልና ለኢንስቲትዩቱ የማሳወቅ፣

(3) Seize genetic resources being transported out of the country and the person transporting same without permit from the Institute and immediately report same to the nearby relevant body such as federal or state police, militia, inland security, anti-terrorism, or immigration forces and the Institute;

(፬) ወደ ውጭ ሀገር የሚላክ የጄኔቲክ ሀብት ምርት መያዣ ላይ በምርቱ ውስጥ የሚገኘውን የጄኔቲክ ሀብት መጠቀም የተከለከለ መሆኑንና ተጠቅሞ መገኘትም በሕግ የሚያስቀጣ ድርጊት መሆኑን የሚገልጽ ቃል የተፃፈበት መሆኑን የማረጋገጥ፣

(፭) ወደ ሀገር ውስጥ የሚገቡ የጄኔቲክ ሀብቶች የሰጪውን ሀገር የአርክቦትና የጥቅም ተጋሪነት ሕጎች መሠረት ፈቃድ የተሰጣቸው መሆኑን የማረጋገጥ፣ አስፈላጊው ፈቃድ ላይኖር ወደ ሀገር ውስጥ በመግባት ላይ የሚገኝ የጄኔቲክ ሀብትንና የጄኔቲክ ሀብቱን ወደ ሀገር ውስጥ በማስገባት ላይ የሚገኝን ሰው መያዝና ወዲያውኑ በአካባቢው ለሚገኙ የፌደራል ወይም የክልል ፖሊስ፣ ሚሊሺያ፣ የሀገር ውስጥ ደህንነት፣ ፀረ ሽብር ኃይል፣ የኑምሩክ ወይም የኢሚግሬሽን ተቋማትና ለመሳሰሉ አግባብነት ላላቸው አካላትና ለኢንስቲትዩቱ የማሳወቅ።

፴. የምርት ወይም የግብይት አጽዳቂ ተቋማት ኃላፊነቶች

የምርት ወይም የግብይት አጽዳቂ ተቋማት የጄኔቲክ ሀብትን ወይም የማኅበረሰብ ዕወቀትን በመጠቀም የሚደረግን የምርት ሂደት ወይም ግብይት ከማጽደቃቸው በፊት አመልካቹ ጄኔቲክ ሀብቱ ወይም የማኅበረሰብ ዕወቀቱ የተገኘበት ሀገር የአርክቦትና የጥቅም ተጋሪነት መሥፈርቶች ማሟላቱን ማረጋገጥ አለባቸው።

፴፩. የመልዕክት አስተላላፊ ድርጅቶች ኃላፊነቶች

(፩) የፖስታና ሌሎች የፈጣን መልዕክት አስተላላፊ ድርጅቶች የጄኔቲክ ሀብትን በመልዕክትነት ከኢትዮጵያ ውጭ ለመላክ ከመቀበላቸውና ከመላካቸው በፊት ደንበኞቻቸው የጄኔቲክ ሀብትን ከሀገር ለማስወጣት ከኢንስቲትዩቱ የተሰጣቸውን ፈቃድ እንዲያቀርቡ መጠየቅ አለባቸው።

(፪) ኢንስቲትዩቱ የጄኔቲክ ሀብትን በፖስታና ሌሎች የፈጣን መልዕክት አስተላላፊ ድርጅቶች አማካይነት ከሀገር ለማስወጣት ፈቃድ ሲሰጥ፣ የጄኔቲክ ሀብቱ ወደ ሦስተኛ ሰው እጅ እንዳይገባ ለመከላከል፣ የመልዕክት አስተላላፊ ድርጅቶች የተቀባዩን አድራሻ መዝግበው መያዝ አለባቸው።

፴፪. የምግብ፣ የመድኃኒትና ጤና ክብካቤ አስተዳደርና ቁጥጥር ባለሥልጣን ኃላፊነቶች

የጄኔቲክ ሀብትን በመጠቀም ለሚመረት ማንኛውም ምርት ፈቃድ ከመስጠቱ በፊት የጄኔቲክ ሀብቱ የተገኘበት ሀገር የአርክቦትና የጥቅም ተጋሪነት ሕጎች መሠረት አርክቦት መፈጸሙን ማረጋገጥ ይኖርበታል።

ክፍል ስድስት

የጄኔቲክ ሀብት አሰሳ

፴፫. ክልከላ

(4) Ensure that a statement is written on the package of a biological resource product to be exported indicating that the use of the genetic resources contained in the product is prohibited and doing so would constitute an offence;

(5) Ensure that genetic resources imported into Ethiopia got permission as per the access and benefit-sharing laws of the country providing the genetic resources and seize genetic resources being imported into the country and the person importing the same without permit from the provider country and immediately report the same to the nearby relevant body such as federal or state police, militia, inland security, anti-terrorism, customs or immigration forces and the Institute.

30. Responsibilities of Product or Market Approval Institutions

Product and or market approval offices, before approving production or marketing of the product based on genetic resources or community knowledge, shall ensure that the applicant has fulfilled the access and benefit-sharing requirements of the country providing genetic resource or community knowledge.

31. Responsibilities of Mail Service Institutions

(1) Postal and other courier service institutions shall, before receiving and transporting genetic resources out of the country as mail, require their clients to produce permit from the Institute to export the genetic resources out of the country.

(2) The Institute, while issuing export permit of genetic resources via mail service institutions, the mail service institutions shall register the recipient's address with the view to prohibiting delivery to unauthorized third parties.

32. Responsibilities of Food, Medicine and Health Care Administration and Control Authority

Before granting on issuing permit for any production using genetic resources shall ensure that the genetic resource has been accessed according to the access and benefit-sharing laws of the providing country.

PART SIX

EXPLORATION OF GENETIC RESOURCES

33. Prohibition

(፩) የዚህ አዋጅ አንቀጽ ፬ (፪) ድንጋጌ እንደተጠበቀ ሆኖ ከኢንስቲትዩቱ የጄኔቲክ ሀብት አሰሳ ፈቃድ የተሰጠው ካልሆነ በስተቀር ማንኛውም ሰው የጄኔቲክ ሀብት አሰሳ ለማካሄድ አይችልም፣

(፪) የዚህ አንቀጽ ንዑስ አንቀጽ (፩) ግንጋጌ ቢኖርም የጄኔቲክ ሀብትን ለመጠበቅ በሕግ ኃላፊነት የተሰጣቸው የመንግሥት አካላት ኃላፊነታቸውን ለመወጣት ለሚያደርጉት የጄኔቲክ ሀብት አሰሳ ከኢንስቲትዩቱ ፈቃድ ማግኘት አያስፈልጋቸውም። ሆኖም ግን ከሚሠሩበት መሥሪያ ቤት የአሰሳ ደብደቤ መያዝ አለባቸው፣ ውጤቶቻቸውንም ለኢንስቲትዩቱ የመረጃ ማዕከል መስጠት አለባቸው።

፴፬. ማመልከቻ ስለማቅረብ

(፩) የጄኔቲክ ሀብት አሰሳ ፈቃድ ለማግኘት የሚፈልግ ማንኛውም ሰው ለኢንስቲትዩቱ የጽሑፍ ማመልከቻ ማቅረብ ይኖርበታል።

(፪) ማመልከቻው የአሰሳውን ዓላማ፣ የሚታሰሰውን ጄኔቲክ ሀብት ዓይነት፣ አሰሳው የሚካሄድበትን አካባቢና አሰሳውን ለማካሄድ የታቀደበትን ጊዜ ማመልከት አለበት።

፴፭. የአሰሳ ፍቃድ ስለመስጠት

(፩) ኢንስቲትዩቱ የተሟላ የጄኔቲክ ሀብት አሰሳ ማመልከቻ ሲቀርብለት፣ አስፈላጊ በሆነ ጊዜ አግባብነት ካለው ተቋም ጋር በመመካከር ለአመልካቹ የአሰሳ ፈቃድ ይሰጣል፣

(፪) የአሰሳ ፍቃዱ የሚታሰሰውን የጄኔቲክ ሀብት ዓይነት፣ አሰሳው የሚካሄድበትን አካባቢ፣ አሰሳው ሊካሄድ የታቀደበትን የጊዜ ሰሌዳና ኢንስቲትዩቱ አስፈላጊ ናቸው የሚላቸውን ሌሎች ሁኔታዎችን ማመልከት አለበት፣

(፫) ኢንስቲትዩቱ የአሰሳ ፍቃድ ለውጭ ሀገር ዜጋ በሚሰጥበት ጊዜ በአሰሳው ላይ አብረው እንዲሰሩ ባለሙያዎቹን መመደብ ወይም አግባብነት ያለውን ተቋም መወከል አለበት።

፴፮. የአሳሾች ግዴታዎች

የአሰሳ ባለፈቃድ የሚከተሉት ግዴታዎች ይኖሩበታል፣

(፩) የአሰሳ ፈቃዱን ቅጂ አሰሳው በሚካሄድበት አካባቢ ላለው ወረዳ አግባብነት ያለው አካል የመስጠት፣

(፪) በአሰሳ ፍቃዱ ውስጥ የተጠቀሱ ግዴታዎችን በሚገባ የማክበር፣

(፫) አሰሳው ሲጠናቀቅ ስለአሰሳው ከንዋኔ ዝርዝርና የተሟላ ሪፖርት ለኢንስቲትዩቱ የማቅረብ፣

(፬) ጥያቄ በቀረበለት ጊዜ የአሰሳ ፈቃዱን የማሳየት፣

(1) Without prejudice to the provisions of Article 4(2) of this Proclamation, no person may conduct exploration of genetic resources unless in possession of exploration permit from the Institute.

(2) Notwithstanding the provisions of Sub-Article (1) of this Article, organs of the state which are empowered by law to conserve genetic resources are not required to obtain exploration permit to conduct exploration of genetic resources in the discharge of their duties. However, they need to have an exploration letter and shall submit the results of their exploration to the database of the Institute.

34. Application

(1) Any person who wants to obtain exploration permit shall present written application to the Institute.

(2) The application shall specify the purpose of the exploration, the types of the genetic resources to be explored, the locality where the exploration shall be conducted and the time schedule for the exploration.

35. Granting Exploration Permit

(1) Upon receiving a complete exploration application, the Institute shall, in consultation with the relevant institution where appropriate, grant an exploration permit to the applicant.

(2) The exploration permit shall specify the types of the genetic resources to be explored, the locality where the exploration shall take place, the time schedule of the exploration and any other condition which the Institute deems necessary.

(3) Where the Institute grants exploration permit to a foreigner, it shall assign its scientific personnel or designate other relevant institution to accompany the exploration mission

36. Obligations of Explorers

Any holder of an exploration permit shall have the following obligations:

(1) deposit a copy of the exploration permit with the relevant institution in the district of the locality where the exploration will be conducted;

(2) strictly observe the terms and conditions specified in the permit;

(3) present to the Institute a detailed and complete report of the exploration mission upon its completion;

(4) show, up on request, the exploration permit issued to him;

(፭) አሰሳው በሚካሄድበት አካባቢ ያለውን ባሕል፣ ልማድ፣ እሴት፣ የንብረትመብቶችና የሀገሪቱን ሕጎች የማክበር።

(5) respect local customs, traditions, values, property rights in the locality where the exploration shall be conducted and the laws of the country.

ክፍል ሰባት
የአርክቦት አስተዳደር

PART SEVEN
ACCESS ADMINISTRATION

፴፯. የኢንስቲትዩቱ ሥልጣንና ተግባር

37. Powers and Duties of the Institute

(፩) ኢንስቲትዩቱ ለጂኔቲክ ሀብትና ለማኅበረሰብ ዕውቀት አርክቦትና ከእነርሱም አጠቃቀም ከሚገኘው ጥቅም ተጋሪነትን አስመልክቶ የመፈጸምና ለማስፈጸም ሥልጣን ያለው ብሔራዊ ተቋምና ብሔራዊ ተጠሪ ሆኖ ተሰይሟል፣

1. The Institute is designated as the Competent National Authority and National Focal Point for access to genetic resources and community knowledge and sharing benefits arising from their use.

(፪) በዚህ አዋጅ በሌሎች አንቀጾች፣ እንዲሁም በደንብ ቁጥር ፪፻፺፩/፳፻፭ የተሰጠው ሥልጣንና ተግባር እንደተጠበቀ ሆኖ የሚከተሉት ሥልጣንና ተግባር ይኖሩታል፣

2. Without prejudice to the powers and duties entrusted to it in other provisions of this Proclamation and by Regulation No. 291/2013, the Institute shall have the powers and duties to:

(ሀ) የአርክቦት መስፈርቶች ሲሟሉ እነዚሁ መሟላታቸውን የሚገልጽ የጽሑፍ ማስረጃ መስጠት፣ አስቀድሞ በመገንዘብ የሚሰጥ እሽታና የጋራ ስምምነት ውል የሚገኙበትን ሥነ ሥርዓቶችና መስፈርቶችን አስመልክቶ መረጃና ምክር መስጠት፣

(a) issue written evidence that access requirements have been met, give information and advice on applicable procedures and requirements for obtaining prior informed consent and mutually agreed terms;

(ለ) ለጂኔቲክ ሀብት ወይም የማኅበረሰብ ዕውቀት አርክቦት አመልካቾች፣ አስቀድሞ በመገንዘብ የሚሰጥ እሽታ፣ የጋራ ስምምነት ውል፣ የጥቅም ተጋሪነት ሥርዓቶች ስለሚከናወኑባቸው ሁኔታዎች እንዲሁም ስለሚመለከታቸው የአካባቢ ማኅበረሰቦችና አግባብ ስላላቸው ሌሎች ባለድርሻ አካላት መረጃ የማቅረብ፣

(b) make information available for applicants seeking access to genetic resources and community knowledge, on procedures for obtaining prior informed consent and establishing mutually agreed terms, benefit-sharing and the concerned local communities and relevant stakeholders;

(ሐ) የጂኔቲክ ሀብትና የማኅበረሰብ ዕውቀት አርክቦት በዚህ አዋጅና ይህንን አዋጅ መሠረት በማድረግ በሚወጡ ደንቦችና መመሪያዎች መሠረት መከናወኑን የማረጋገጥ፣

(c) follow up and ensure that access is carried out in accordance with this Proclamation as well as regulations and directives issued hereunder;

(መ) ከአርክቦት የሚገኙ ጥቅሞችን መቀበልና ለባለ ጥቅሙ እንዲደርስ የማድረግ፣

(d) collect the benefits to be obtained from mutually agreed terms and pass over to beneficiaries;

(ሠ) የዚህን አዋጅ ይዘት ለሕዝብ የማስተዋወቅ፣

(e) sensitize contents of this Proclamation to the people;

(ረ) የአርክቦት ውል ሞዴሎችን ማዘጋጀት፣ መመሪያዎችንና ማኑዋሎችን ለቁጥጥር ተቋማትና ለሌሎች የሚመለከታቸው አካላት የማሰራጨት፣

(f) prepare model mutually agreed terms, distribute guidelines and manuals for the checkpoints and other relevant institutions;

(ሰ) የጂኔቲክ ሀብትና የማኅበረሰብ ዕውቀት እንቅስቃሴዎችን ወይም መጠቀምን አስመልክቶ ሥራቸውን በተቀላጠፈ ሁኔታ እንዲሠሩ ለማስቻል፣ ለቁጥጥር ተቋማትና ለሌሎች የሚመለከታቸው አካላት ተከታታይ የሥልጠና መርሐ ግብሮችን የማዘጋጀት፣

(g) prepare continuous training sessions for checkpoints and other relevant institutions to facilitate their activities in relation to movement or use of genetic resources and community knowledge;

(ሸ) በዚህ አዋጅ የቁጥጥር ተቋማት ሆነው የተሰየሙትን መሥሪያ ቤቶች የማስተባበር፣

(h) coordinate those offices which are designated as checkpoints by this Proclamation;

(ቀ) የዚህን አዋጅና በሥሩም የሚወጡትን ደንብን መመሪያዎች በተግባር ላይ ለማዋል ሕግና ሥነ-ሥርዓቶችን የማስከበርና የቁጥጥር እርምጃዎችን የመምራት፣

(በ) ተግባሩን በተሻለ መንገድ ለማካሄድ አስፈላጊና አመቺ ሆኖ በሚገኝበት ጊዜ ሥልጣንና ተግባሩን በሕግ ለተቋቋመ አካል በውክልና የመስጠት፣

(ተ) ከብዝሀ ሕይወት ኮንቬንሽን ሴክሬታሪያት ጋር ግንኙነት የመመሥረት፣

(ቸ) ከኢንስቲትዩቱ ዕውቅና ውጭ የተወሰዱ የጂኔቲክ ሀብቶች ወይም የማኅበረሰብ ዕውቀቶች መኖራቸውን ሲያረጋግጥ መንግሥትና የአካባቢ ማኅበረሰቦች ጥቅም የሚከበርባቸውን መንገዶች የማፈላለግ፣

(ኀ) ራሱ የቁጥጥር ተቋም በመሆን መሥራት፣

(ነ) በጂኔቲክ ሀብቶችና ማኅበረሰብ ዕውቀት ላይ ብሔራዊ የመረጃ ቋት ማደራጀት፣

(ኘ) ዓላማዎቹን ለማሳካት አስፈላጊ የሆኑ ሌሎች ተግባራትን የማከናወን።

(i) lead the compliance and monitoring activities for the implementation of the provisions of this Proclamation, regulation and guidelines issued therewith;

(j) delegate some of its powers and duties to other legally established bodies where deemed necessary and convenient to carry out its duties in a better way;

(k) liaison with the Secretariat to the Convention on Biological Diversity;

(l) make efforts for the recognition of benefits of the state and local communities when it enures that genetic resources or community knowledge are taken out of the the country without its knowledge;

(m) act as a checkpoint itself;

(n) organize a national database on genetic resources and community knowledge;

(o) carry out such other activities as are necessary for the implementation of this Proclamation.

፴፰. የክልል መስተዳድር አካላት ኃላፊነት

የቀበሌ መስተዳድሮችና በየደረጃው የሚገኙ የጂኔቲክ ሀብት ጥበቃና ማንበር የሚመለከታቸው የክልል መስተዳድር አካላት፣

(፩) በዚህ አዋጅ አንቀጽ ፬ ንዑስ አንቀጽ ፩ (ሀ) ከተገለጸው ውጭ ማንኛውም ሰው ፈቃድ ሳይኖረው የጂኔቲክ ሀብት ከአካባቢያቸው እንዳይሰበሰብና እንዳይወሰድ የመቆጣጠር፣ እና

(፪) በዚህ አንቀጽ ንዑስ አንቀጽ ፩ በተገለጸው ሁኔታ ማንኛውም ሰው ፈቃድ ሳይኖረው ከአካባቢያቸው የጂኔቲክ ሀብት ሲሰበስብ ወይም ሰብስቦ ይዞ ሲሄድ ከተገኘ፣ የሰበሰበውን የጂኔቲክ ሀብት በመያዝ ለሕግ እንዲቀርብ የማድረግና የተያዘውን የጂኔቲክ ሀብት ዓይነትና ይዞ የተገኘውን ሰው ማንነት ለኢንስቲትዩቱ በዝርዝር የማሳወቅ።

38. Responsibilities of Regional Administration Bodies

Kebele administration and regional bodies at all levels responsible for the protection and conservation of genetic resources shall:

(1) With the exception of conditions under Article 4 sub article 1 (a) of this Proclamation, regulate that genetic resources is not accessed from their respective jurisdiction without permit by any person; and

(2) As stipulated in sub article (1) of this Article, if they find any person collecting or taking genetic resources from their respective jurisdiction without permit, seize the genetic resource and present him to the concerned law enforcement organ and notify the Institute together with the detailed particulars of the genetic resource and the person found in possession of same.

፴፱. የአካባቢ ማኅበረሰቦች ኃላፊነት

የአካባቢ ማኅበረሰቦች በዚህ አዋጅ አንቀጽ ፬ ንዑስ አንቀጽ ፩ (ሀ) ከተገለጸው ውጭ ማንኛውም ሰው ከአካባቢያቸው የጂኔቲክ ሀብት ሲሰበስብ ወይም ሰብስቦ ይዞ ሲሄድ ከተገኘ፣ ፈቃድ ያለው መሆኑን የመጠየቅና ፈቃድ የሌለው ከሆነ ወዲያውኑ በአቅራቢያው ለሚገኝ የቀበሌ ወይም የወረዳ መስተዳድር የማሳወቅ ወይም ወደነዚሁ እንዲያቀርብ የማደረግ ኃላፊነት አለባቸው።

39. Responsibilities of Local Communities

Local communities shall, with the exception of conditions under Article 4 sub article 1 (a) of this Proclamation, require any person collecting or taking genetic resource from their localities, to show his access permit, and if he is without permit immediately notify or present him to the nearest kebele or wereda administration.

ክፍል ስምንት
ልዩ ልዩ ድንጋጌዎች

PART EIGHT
MISCELLANEOUS PROVISIONS

፵. የመተባበር ግዴታ

ለዚህ አዋጅና በአዋጁ መሠረት ለሚወጡ ደንቦችና መመሪያዎች አፈጻጸም ማንኛውም ሰው ከኢንስቲትዩቱ፣ ከቁጥጥር ተቋማትና ሌሎች ባለድርሻ አካላት፣ እንዲሁም ከሚመለከታቸው የአካባቢ ማኅበረሰቦች ጋር የመተባበር ግዴታ አለበት።

40. Duty to Cooperate

Any person shall have the duty to cooperate with the Institute, checkpoints and other stakeholders, and local communities in the implementation of this Proclamation as well as regulations and directives issued hereunder.

፵፩. ጥፋትና ቅጣት

41. Offences and Penalties

(፩) ማንኛውም ሰው፣

(ሀ) ከኢንስቲትዩቱ የአርከቦት ፈቃድ በቅድሚያ ሳያገኝ የጄኔቲክ ሀብት ወይም የማኅበረሰብ ዕውቀትን ያረከበ፣

(ለ) በአርከቦት ማመልከቻ ውስጥ ወይም የጋራ ስምምነት ውል አፈጻጸም ክትትል ወቅት የሐሰት መረጃ የሰጠ፣

(ሐ) ከኢንስቲትዩቱ ፈቃድ ሳያገኝ በጋራ ስምምነቱ ውስጥ የተጠቀሰውን የአርከቦት ዓላማ የለወጠ፣

(መ) የአሰሳ ፈቃድ በቅድሚያ ከኢንስቲትዩቱ ሳያገኝ የጄኔቲክ ሀብት አሰሳ ያካሄደ ወይም የአሰሳ ፈቃድ ማመልከቻ ውስጥ የሐሰት መረጃ የሰጠ፣

(ሠ) የሀገሩን የአርከቦትና ጥቅም ተጋሪነት ሕጎች በጣሰ መልኩ ከሌላ ሀገር የተገኘን የጄኔቲክ ሀብት ወይም የማኅበረሰብ ዕውቀት ይዞ ወይም ሲጠቀም የተገኘ ከሆነ፣

1. Any person who:

a. Accesses genetic resources or community knowledge without obtaining an access permit from the Institute;

b. Provides false information in the access application or in the course of subsequent monitoring of mutually agreed terms;

c. Subsequently changes the purpose of access specified in the mutually agreed terms without obtaining permit from the Institute to that effect;

d. Explores genetic resources without obtaining exploration permit from the Institute or provides false information in the application for exploration permit;

e. Possesses or uses genetic resources or community knowledge obtained from another country in contravention of the access and benefit-sharing laws of such country;

እንደ አግባብነቱ፣ ያረከበው የጄኔቲክ ሀብት መወረሱና የተሰጠው ፈቃድ መሠረዙ እንደዚሁም በፍትሐብሔር ረገድ የሚኖርበት ኃላፊነት ሳይቀር እንደነገሩ ሁኔታ ከሦስት ዓመት በማያንስና ከአምስት ዓመት በማይበልጥ ጽኑ እሥራትና ከብር ሃምሳ ሺህ እስከ ሦስት መቶ ሺህ ሊደርስ በሚችል መቀጮ ይቀጣል።

Shall, when appropriate and without prejudice to the confiscation of the genetic resource accessed, the cancellation of the access permit granted, and the civil liability arising thereof, be punished, depending on the gravity of the circumstance with rigorous imprisonment of not less than three years and not more than five years and a fine of not less than fifty-thousand and not exceeding three hundred-thousand birr;

(፪) በዚህ አንቀጽ ንዑስ አንቀጽ ፩ የተጠቀሱት ጥፋቶች የተፈጸሙት በኢትየጵያ ብቻ የሚገኝ የጄኔቲክ ሀብትን በሚመለከት የሆነ እንደሆነ፣ እንደ ነገሩ ሁኔታ ከአምስት ዓመት በማያንስ እና ከአሥራ ሁለት ዓመት በማይበልጥ ጽኑ እሥራትና ከሁለት መቶ ሺህ ብር እስከ አምስት መቶ ሺህ ብር ሊደርስ በሚችል መቀጮ ይቀጣል።

(2) Where the offences committed under sub article 1 of this Article are in relation to genetic resources endemic to Ethiopia, the punishment shall be, depending on the circumstance, rigorous imprisonment of not less than five years and not exceeding twelve-years and a fine ranging from two hundred thousand birr to five hundred thousand birr;

(፫) በዚህ አንቀጽ መሠረት ፍርድ ቤቱ ውሳኔ በሚሰጥበት ጊዜ፣ ከጥፋተኛው ተማባር ጋር በተያያዘ በአካባቢ ላይ ለደረሰ ጉዳት ካሣ ጨምሮ ሊያስከፍል ይችላል።

(3) In the event of a conviction in terms of this Article, the court may order that any damage to the environment resulting from the offence be repaired by the person so convicted.

(፬) እንደ ጥፋቱ ክብደትና እንደ ነገሩ ሁኔታ ፍርድ ቤቱ በዚህ አንቀጽ ከተገለጸው የበለጠ የገንዘብ ቅጣት በጥፋተኛው ላይ ሊያስተላለፍ ይችላል።

(4) Depending on the gravity of the offence and the circumstances in which the offence is committed, the court may impose a heavier fine than indicated in this Article.

፵፪. የመሸጋገሪያ ድንጋጌዎች

42. Transitory Provisions

ይህ አዋጅ ከመውጣቱ በፊት የተደረጉ የጋራ ስምምነት ውሎች በቀደመው አዋጅ ድንጋጌዎች መሠረት ይፈጸማሉ።

፵፫. የተሻሩና ተፈጻሚነት የማይኖራቸው ሕጎች

(፩) የጄኔቲክ ሀብትና የማኅበረሰብ ዕውቀት አርክቦት እና የማኅበረሰብ መብቶች አዋጅ ቁጥር ፬፻፹፪/፲፱፻፺ በዚህ አዋጅ ተሽሯል፣

(፪) ከዚህ አዋጅ ጋር የሚቃረን ማንኛውም ሕግ፣ ደንብ፣ መመሪያ ወይም የአሠራር ልምድ በዚህ አዋጅ በተመለከቱ ጉዳዮች ላይ ተፈጻሚ አይሆንም።

፵፬. ደንብ የማውጣት ሥልጣን

የሚኒስትሮች ምክር ቤት ይህን አዋጅ በሚገባ ለማስፈጸም አስፈላጊ የሆኑ ደንቦችን ማውጣት ይችላል።

፵፭. አዋጁ የሚፀናበት ጊዜ

ይህ አዋጅ በፌዴራል ነጋሪት ጋዜጣ ታትሞ ከወጣበት ቀን ጀምሮ የፀና ይሆናል።

አዲስ አበባ ... ቀን ... ፳፻፲፩ ዓ.ም.

ሣህለወርቅ ዘውዴ

የኢትዮጵያ ፌዴራላዊ ዲሞክራሲያዊ ሪፐብሊክ ፕሬዚዳንት

Mutually agreed terms made prior to the coming into force of this Proclamation shall be operational with the provisions of the previous Proclamation.

43. Repealed and Inapplicable Laws

1. Access to Genetic Resources and Community Knowledge and Community Rights Proclamation No. 482/2006 is hereby repealed;

2. No law, regulation, directive or practice shall, in so far as it is inconsistent with this Proclamation, have effect with respect to matter provided for by this Proclamation.

44. Power to Issue Regulations

The Council of Ministers may issue regulations necessary for the proper implementation of this Proclamation.

45. Effective Date

This Proclamation shall come in to force upon publication in the Federal Negarit Gazeta

Done at Addis Ababa, this XXth day of … 2019

SAHLEWORK ZEWDIE

PRESIDENT OF THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

Annex IV

246882

MEMORANDUM OF UNDERSTANDING

Research & Development of international markets for Teff-based products

Author:
Date: March 26, 2003
Version: final

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29/07/05

1 Preamble

Ethiopia is the main Teff (*Eragrostis tef*) producing country in the world. Much of the produce, however, is consumed locally and at a household level. The Ethiopian Government is pushing towards market-based agricultural research more than ever. For Ethiopia, therefore, product development from tef other than *injera* is an important feature. An indigenous cereal like Teff, can benefit from this approach by breeding for value-added traits and commercialize their products at an industrial scale, and at international level. The expected manifestations are promoted investment, better market to the Teff farmer and increased Teff export. This can be practically achieved by working in partnership, as the case may be, with foreign or local establishments towards mutual benefits.

In the Netherlands, at research level, field production of Teff has been taking place since the year 2000 through Larenstein University, a major university in professional agricultural education. For almost 100 years it is involved in tropical agriculture. Many professionals in Ethiopia have been educated at Larenstein University in diploma, bachelors or masters courses.

Since 1997 Larenstein University is participating in two Teff projects with the Mekelle University and Alemaya University.
Early 2002 a commercial organization was founded, called Soil & Crop Improvement (S&C), that initiated organized research on agricultural scale in the interest of Dutch farmers who are looking for alternative crops. S&C found production promising and is targeting interesting niche markets. These markets are found with top-sportsmen, organic & health food, and especially for celiac patients (who are intolerant/allergic, in different degree, to gluten from most other cereals – wheat, rye, barley, oats).

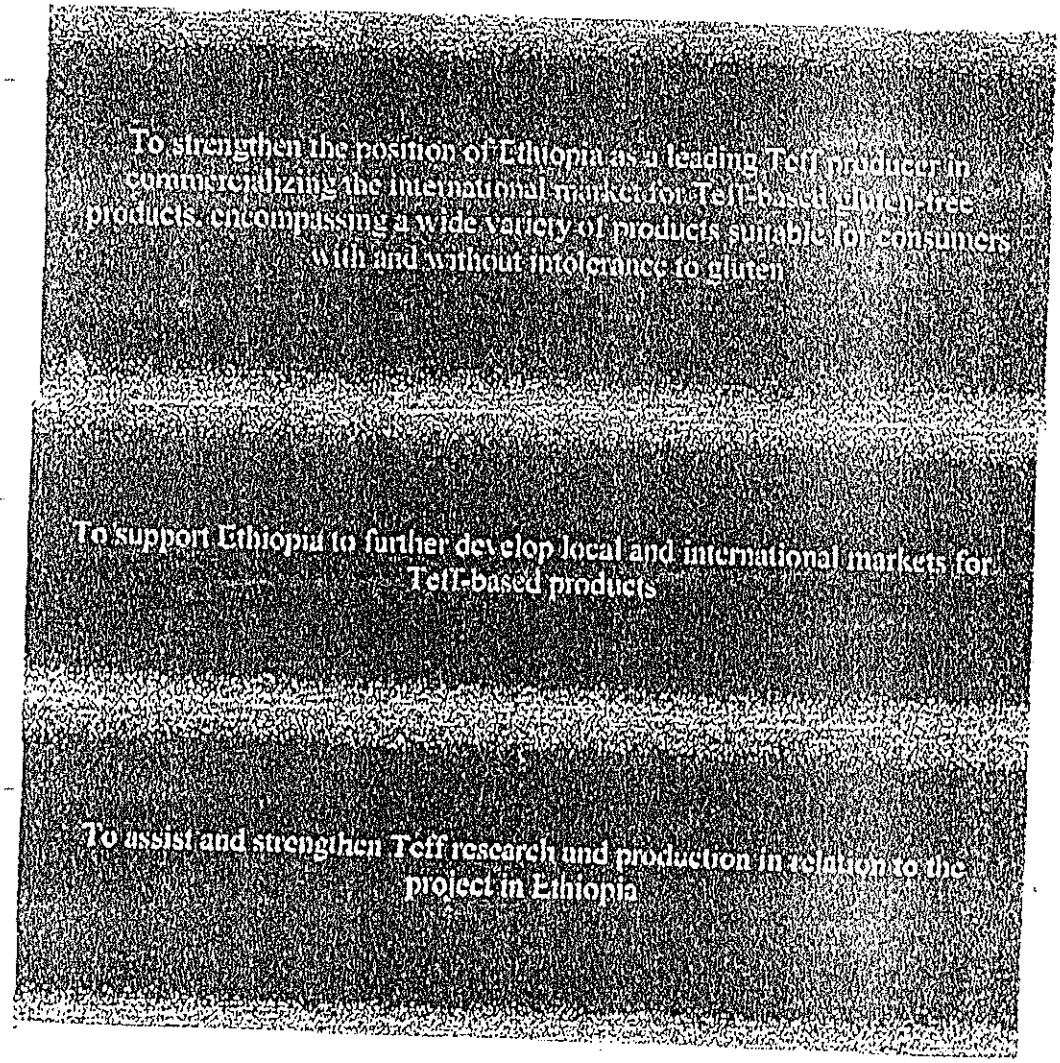
Gluten intolerance is typically found in all those countries where wheat is used as an ingredient in many food products. Researchers estimate this market to be halve to two percent of the population in those countries. Based on a research program of S&C, scientists have confirmed the absence of any gluten in teff..

Based on research by S&C (and partners) on baking quality, Teff proved to be very promising. S&C is aiming to introduce bread, cake, cookies, beer, binding agents, and different type of premixed flour.

In order to secure the required scientific support for its ambitious plans and to benefit from the long lasting relationship that Larenstein University has with Ethiopia, S&C has proposed to Larenstein University to enter into a formal relationship, which Larenstein is willing to accept.
In recognition of principles of ethics and equity for nations over genetic resources Larenstein University has agreed with S&C on the establishment of tef-fund for improvement of Ethiopian agricultural infrastructure (TFIET, see Article 6 hereunder). Contribution to the fund will come from S&C and Larenstein University will be responsible for the management of the

fund. The people behind S&C sincerely believe that Ethiopia should benefit from the international developments of this indigenous cereal.

2 Objectives



23/07/03

3 Partnership

3.1 Ethiopia

a. Ethiopian Agricultural Research Organization (EARO)
Address: P. O. Box, 2003, Addis Ababa

EARO, through the Debre Zeit Agricultural Research Center, is responsible for the coordination of the National Tef Research Project in Ethiopia. It has developed and released more than a dozen teff varieties and maintains the initial seed material (breeders seed). It is envisaged that, in the future, National Agricultural Inputs Authority (NAIA), Institute of Biodiversity Conservation and Research (IBCR), Ethiopian Science and Technology Commission (ESTC), and Licensed Private Grain Exporters will be included as deemed necessary.

3.2 The Netherlands

a. Larenstein Transfer , a fully owned subsidiary of Larenstein University, further referred to as Larenstein University ("LU")
Address: P.O. Box 9001
NL-6880 GB Velp

LT is a major university in professional agricultural education. For almost 100 years it is involved in tropical agriculture. Many professionals in Ethiopia have been educated at Larenstein in diploma, bachelors or masters courses. Since 1997 Larenstein is participating in two similar projects with the Mekelle University and Alemaya University.

b. Soil and Crop Improvement (S&C)
Address: P. O. Box, 427
NL-9400 AK Assen

S&C is a commercial organization with as target to sell Teff-flour to the industry for the production of gluten free baking products and other food components, mainly targeted to niche markets in Europe, North America, Australia and Oceanië and the Far East.

4 Cultivars

4.1 Registration of Ethiopian and S&C cultivars

It is important to register Ethiopian Teff cultivars outside Ethiopia, in the name and on behalf of the Ethiopian Agricultural Research Organization, not to loose breeder rights and the benefits of the intellectual property of the varieties. Initially it concerns Europe, USA, Canada and Australia for which direct action is needed. S&C will take action to register Ethiopian cultivars outside Ethiopia as far as possible concerning the regulations of UPOV and comparable administration authorities (for example in the USA). In addition to the phenotypic cultivar description the possibilities of AFLP or RFLP fingerprinting will be considered and if relevant implemented by S&C.

The registration however will not be implemented until a renegotiated settlement is reached between S&C, EARO and other relevant institutions in Ethiopia, and possibly, in the Netherlands.

4.2 Deployment of Ethiopian Varieties by S&C

As long as the breeder rights last, S&C has the right to use Ethiopian released varieties worldwide under the conditions of payment of property rights to EARO as indicated below. S&C states, that all rights of Ethiopian cultivars and germplasm is owned by Ethiopia and will actively make sure that the Ethiopian interests are safeguarded. S&C shall not pass the seeds of varieties to third parties without the knowledge of EARO.

4.3 Deployment of new Varieties

New varieties, developed by S&C, will be co-owned by EARO and S&C. EARO and S&C can use such varieties for their own purposes under the condition that one party should not damage the interest of the other party while doing so.

Any new varieties bred in corporation between EARO, Larenstein and S&C will be first presented to S&C to strengthen its market position.

5 Research program

5.1 *Research by and through S&C (outside Ethiopia)*

5.1.1 Baking quality

Baking quality is an important feature concerning the production of bread. S&C has gained a lot of experience on this subject and knows how to proceed with Teff grain from different origins to obtain flour for the production of good quality bread.

As Ethiopia could be an important provider of high quality Teff seed, S&C will research, using the Ethiopian cultivars, the following topics:

- Determination of baking quality of Ethiopian Teff cultivars grown in Ethiopia;
- Determination of baking quality of Ethiopian Teff cultivars grown in The Netherlands and elsewhere.

The information gathered in this research will be shared and can be used for mutual interests.

5.1.2 Product development

Teff has an enormous potential for many different products in many different markets. Each and every country / market has it own standards for taste, color and texture. As a consequence a broad and extensive program is defined and in future will have to be extended to understand the international markets and its needs.

Currently S&C focuses on product development for the local markets in the Netherlands, Sweden, Germany France, Italy and the USA. It is expected that this year this program will have to be extended to Australia, New Zealand as well as the Far East.

For this purpose in Ethiopian produced grain will be used. The information obtained about what variety delivers which results will be shared with Ethiopian counterparts.

5.1.3 Adaptation

Experience so far shows that the baking quality of Teff is excellent if different breeds, coming from different climate zones, are specifically mixed. This is one of the trade marks used by S&C.

To further extend the value in the international food industry of Teff it is important to investigate the adaptation of different varieties to different climate zones and their specific growing conditions.

5.1.4 Breeding

Important breeding topics are earliness, starch quality, resistance to lodging, seed size, seed color (whiter flour and bread for the South-European market).

5.2 *Research in Ethiopia in collaboration with Larenstein University*

5.2.1 Production of certified gluten-free Teff for export

Investigate the feasibility to grow Teff in Ethiopia and deliver it according to the norms and standards of the gluten free market demands. This encompasses not only the production of Teff, but also the distribution, storage, preparation and packaging.

5.2.2 Mechanization of Teff production and processing

Experience gained with Teff shows that there are excellent possibilities to increase yield and farmers revenues through selection of varieties combined with agricultural measures, such as mechanization of production and processing. The experienced gained outside Ethiopia can be matched with the excellent scientific knowledge in and of the Ethiopian EARO for use within Ethiopia.

5.2.3 Other research programs

Other Teff related research and development will be released later, based on an agreement reached between researchers working for EARO and LU

5.3 *Training*

LU will assist in soliciting scholarships for Ethiopian students.

6 Funding

6.1 Funding R & D in the Netherlands.

S&C is funded through private capital input of shareholders, bank loans based on farmers' participation with land to cover risk and limited support by the local government.

6.2 Funding R & D in Ethiopia

The Foundation Larenstein Ethiopia Teff (FLET) has been established in recognition of principles of ethics and equity for nations over genetic resources. Contribution to the fund will come from S&C and Larenstein Transfer will be responsible for the management of the fund. The objective of the fund is specifically to contribute to the constant improvement of Ethiopian agricultural infrastructure. The main focus for this fund will be in strengthening Teff research in Ethiopia for further improvements of the Teff-production in Ethiopia.

The funding of the foundation:

- A donation to this foundation through a five percent profit sharing (of the net profit after taxation) coming from S&C, with a minimum of Euro 20.000 per year;
- (Up to decision of EARO): the payment of property rights (royalty) by S&C for Teff production under S&C contracts (following the UPOV regulations). This payment will be 10 Euro per hectare for Ethiopian varieties and 5 Euro for new varieties co-owned by EARO and S&C.
- Any other additional financial support from the Netherlands Government, European Union, World Bank, UN and/or other sources. Under certain conditions, development funds double private funding to encourage investments for innovations. Larenstein will examine this possibility and the conditions. Bringing the property royalties in the funds could under such conditions be extremely rewarding.

7 Short term action

In the previous two seasons research has been done with seeds from the seed bank at Larenstein University and imported seeds from USA.

In future S&C is planning the production using Ethiopian Teff varieties and make sure that the related royalties start flowing to Ethiopia. For this purpose S&C requires seeds for multiplication for the production of 2004. The sowing will have to take place before May 2003.

For the 2003 season (March-September) it is the intention to continue further research and start working now with the Ethiopian released Teff varieties within this project.

For both purposes, between 60 and 150 kgs of each released Teff variety will be made available (upon purchase) by EARO for activities mentioned in 4.1" Registration of Ethiopian and S&C cultivars" and 5.1" Research by and through S&C (outside Ethiopia)" in the Netherlands and in other parts of the world under S&C supervision. S&C shall not pass the seeds of these varieties to a third party for research purposes without a written consent of EARO.

8 Information release

Results of any research information conducted on Ethiopian Teff materials and generated from the project shall be owned by both EARO and S&C, and shall be released only upon agreement between the two parties.

9 Approval

For Ethiopian Agricultural Research Organization

Name and Signature _____

Title: DEMEL TEKETAY (D...
DIRECTOR GENERAL

Dated: 12/04/03

For Larenstein University
Name and Signature_ Henk Dijk

Title: __Director_of Larenstein Transfer

Dated: 1 April 2003

For Soil & Crop Improvement

Name and Signature__Hans Turkensteen

Title: __Director

Dated: ___March, 26 th 2003

DZ/110/2003
August 21, 2003

To Whom It May Concern

On the basis of the memorandum of understanding signed between the Ethiopian Agricultural Research Organization (EARO) and Larenstein University "Research and development of international markets for tef-based products", the Debre Zeit Agricultural Research Center (DZARC) of EARO has sold the following tef seeds to Larenstein University for research and development purposes.

No.	Variety	Quantity (kg)
1	DZ-01-1681	120
2	DZ-Cr-358	120
3	DZ-Cr-255	120
4	DZ-Cr-44	120
5	DZ-Cr-82	120
6	DZ-Cr-37	120
7	DZ-01-354	120
8	DZ-01-974	120
9	DZ-01-787	120
10	DZ-01-196	120
11	DZ-01-99	120
12	DZ-01-1285	120

Sincerely,

Solomon Asscfa (Phd)
Center Manager

Annex V

(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) **EP 1 646 287 B1**

(12) **EUROPEAN PATENT SPECIFICATION**

(45) Date of publication and mention of the grant of the patent:
10.01.2007 Bulletin 2007/02

(21) Application number: **04774832.2**

(22) Date of filing: **22.07.2004**

(51) Int Cl.:
A21D 13/04 *(2006.01)* ***A21D 2/36*** *(2006.01)*
A23L 1/164 *(2006.01)* ***A23L 1/00*** *(2006.01)*
A23L 1/0522 *(2006.01)*

(86) International application number:
PCT/NL2004/000524

(87) International publication number:
WO 2005/025319 (24.03.2005 Gazette 2005/12)

(54) **PROCESSING OF TEFF FLOUR**

VERARBEITUNG VON TEFF-MEHL

TRAITEMENT DE FARINE TEFF

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PL PT RO SE SI SK TR

(30) Priority: **22.07.2003 NL 1023977**

(43) Date of publication of application:
19.04.2006 Bulletin 2006/16

(73) Proprietor: **Health & Performance Food International B.V.**
9407 TG Assen (NL)

(72) Inventor: **ROOSJEN, Jans**
NL-9414 AB Hooghalen (NL)

(74) Representative: **Winckels, Johannes Hubertus F. et al**
Vereenigde
Johan de Wittlaan 7
2517 JR Den Haag (NL)

(56) References cited:
US-A- 6 139 884

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- **MARIE DONADIO: "Teff Cookies" -, [Online] 2002, pages 1-2, XP002276230 Retrieved from the Internet: URL:http://www.gnc.com/health_notes/ Recipe /Teff_Cookies.htm> [retrieved on 2004-04-06]**
- **DONNA: "Yogurt Pancakes (teff or buckwheat)" -, [Online] 20 August 1998 (1998-08-20), page 1, XP002276231 Retrieved from the Internet: URL: http://countrylife.net/pages/recipes/6 47.html> [retrieved on 2004-04-06]**
- **BONNIE HAIR: "Teff Muffins" -, [Online] 18 November 1995 (1995-11-18), pages 1-2, XP002276232 Retrieved from the Internet: URL: http://maelstrom.stjohns.edu/CGI/wa.ex e? A2=ind9511&L=celiac&P=R8102> [retrieved on 2004-04-06]**
- **ADAMU ZEGEYE: "Acceptability of Injera with stewed chicken" FOOD QUALITY AND PREFERENCE, vol. 8, no. 4, 1997, pages 293-295, XP002276233**

EP 1 646 287 B1

Description

[0001] The invention relates to flour of *Eragrostis tef* and to products comprising this flour. The invention particularly relates to flour of *Eragrostis* which can well be processed into *inter alia* gluten-free food products and to methods for preparing these food products.

[0002] It has already been known for tens of years that gluten (or similar compounds such as hordeins in barley and secalins in rye) in the food, often coming from flour of wheat, barley, rye, oat and spelt, is not suitable for a large number of people, *inter alia* for babies in the first months of their lives. Many people develop hypersensitivity, which results in patients with a gluten intolerance, or celiac disease.

[0003] Celiac disease and dermatitis herpetiformis (celiac disease of the skin) are caused by a hypersensitivity to gluten. When a celiac disease patient eats or drinks something which has been prepared from or with one or more gluten-containing types of grain or has been in contact therewith, the mucous membrane of the small intestine is affected. A healthy small intestine has a large number of intestinal villi on the inside which together form an enormous surface for food intake. The intestinal villi of celiac disease patients cannot tolerate gluten - or rather, gliadins and glutenins, the building blocks of gluten. As a result of an immune response initiated by gluten, the intestinal villi are affected. Consequently, not all required nutrients can be taken in by the body. This may cause a deficit of *inter alia* vitamins, calcium and iron.

[0004] In the Netherlands, there are an estimated 75,000 celiac disease patients. Celiac disease can be discovered in people of all ages, but two peaks can be distinguished. The first peak is between the sixth and tenth year, the second between the twentieth and fortieth year. Possibly, the second group already has celiac disease from childhood, but the symptoms do not show more clearly (recognizable) until later.

[0005] There is no medicine for gluten intolerance. The only way for a celiac disease patient to prevent or treat symptoms is following a strict diet in which there are no (products of) gluten-containing grains or other crops. This is the gluten-free diet. The diet is sometimes supplemented for some time with iron tablets and extra vitamins and minerals.

[0006] There is wheat starch or wheat flour which has been made gluten-free. This can officially be called gluten-free, but is not 100 percent free of gluten. The content of gluten needs to meet the standard of the Codex Alimentarius. For (wheat) flour made gluten-free, this is 200 parts per million (ppm). However, for some celiac disease patients this is still too much: they have symptoms after eating the flour made gluten-free. Therefore, these people had better opt for the use of products which are naturally gluten-free. For naturally gluten-free products, the set standard is maximally 20 ppm. However, naturally gluten-free products can be contaminated with gluten from other sources during the processing.

[0007] Rice, corn, tapioca, soy, buckwheat, arrowroot, potatoes and chestnuts are known crops which yield gluten-free flour, with which a variety of gluten-free food products can be prepared. Another source for a gluten-free flour is *Eragrostis tef* (also called Teff). This crop has been cultivated for human consumption in mainly Ethiopia and Eritrea for more than 5000 years. In addition, Teff is used more and more often for hay in countries such as South Africa and the United States. Teff flour is traditionally used for preparing injera, a spongelike, gray pancake with a somewhat sourish taste. Injera is usually made from a flour mixture consisting of equal parts of Teff flour and wheat flour diluted with water and yeast. The diluted flour mixture is usually fermented for three to four days before it is baked.
XP 002276233 discloses the preparation of injera from Teff grains.

[0008] Teff grain is in principle suitable to be cultivated on a large scale in large parts of the world. The crop does not make high demands on the nutrient medium and the climate. It is particularly well resistant to drought.

[0009] Compared to other grains, such as wheat, barley and sorghum, Teff has a higher nutritional value. The high nutritional value of Teff is largely due to the fact that the proportion of germ and brans is large compared to the rest of the seed (endosperm). Another reason is that, due to the small size of the seed, the flour is mainly made from the whole kernel, so that no parts are lost (National Research Council, Lost crops in Africa, vol. 1, Grains, 1996). The nutritional value of 100 grams of Teff flour is approx 10 grams of protein, 2.5 grams of fat, 70 grams of carbohydrates and 5 grams of dietary fiber. The caloric value of 100 grams of Teff flour is about 1400-1500 kJ.

[0010] In summary, *Eragrostis* offers an attractive source of (gluten-free) flour. However, it has been found that the preparation of a food product with traditional Teff flour (for instance Teff flour which is mixed with wheat flour for preparing injera) often causes problems. A known problem is the instability of the product, particularly of baked products. In other cases, the product has an unattractive taste and/or structure.

[0011] The invention provides the insight that the above-mentioned problems surprisingly do not occur if Teff flour with a particular falling number is used. The invention provides flour with a grain belonging to the genus *Eragrostis,* characterized in that the flour comprises grain whose falling number at the moment of grinding is at least 250, preferably at least 300, more preferably at least 340, most preferably at least 380. A great advantage of flour with such a falling number resides in the fact that it can, virtually without any problems, be processed into a stable, gluten-free product with an attractive taste and structure. Fig. 1 shows the correlation between the falling number of Teff flour and the baking quality of a dough prepared from Teff flour. Different Teff varieties have been tested in different after-ripening stages and under different cultivation conditions (such as climate, soil type, fertilization) on test and cultivation fie lds. Samples

hereof have been collected and analyzed for *inter alia* falling number and baking quality (with test breads prepared according to the formulation and method of Example 1). This shows that a falling number of at least 250 is needed to obtain a baking product with an acceptable quality, that is, a product that is awarded at least a grade 5 (on a scale of 1-10) by a test panel. A falling number of 300 results in a significantly improved product (assessment: 6), while a product of Teff flour with a falling number of 380-390 is, on average, awarded the grade 7. It can be gathered from Fig. 1 that, for a product which meets the 'market standard' of 7.5, the use of Teff flour with a falling number of at least 400 is required.

[0012] The finding that, for obtaining a good and tasty product, Teff flour with such a falling number needs to be used is unexpected. This is because, for baking bread of wheat flour, the optimal falling number for wheat is between 200 and 250. Conversely, wheat flour with a falling number lower than 120 or higher than 300 is not suitable for processing into (yeast-leavened) a baked product. For instance, with wheat with such high falling numbers, an enzyme preparation (for instance malt flour) is added to the flour to obtain an acceptable product. In contrast with this, Teff flour according to the invention preferably has a falling number which is generally higher than the optimal range of falling numbers of wheat.

[0013] The falling number (also called "Hagberg falling number", abbreviated to HFN) of a grain or ground grain is usually determined according to the Hagberg method. This method gives a measure for the activity of the enzyme alpha-amylase. Alpha-amylase degrades starch to sugars (maltose and glucose). The falling number obtained relates to the amount of undigested sugars in the starch. The higher the falling number, the lower the alpha-amylase activity and the fewer digested sugars are present in the grain. In the Hagberg analysis method, usually, exactly 7 grams of starch with a moisture content of 14% are brought into a tube with 25 ml of water. After vigorous shaking, an agitator is brought into the tube and the whole is placed in a boiling water bath. After this, the agitator is moved up and down 55 times, then to be released in the highest position. Due to its own weight, the agitator falls down through the firmed mixture and the duration thereof, measured with the aid of a second counter (for instance a stopwatch), determines the falling number. The falling number can vary from 61 to 600 seconds.

[0014] The traditional Teff flour, which is obtained by grinding the grain directly after the harvest, still causes problems with the processing thereof in baked products, as elaborated upon in the introduction. The invention now demonstrates that the reason for this is that, directly after harvesting, Teff grain of known Teff varieties has too low a falling number (that is, lower than 250) to be processed into an attractive product.

[0015] It is generally known that grain goes through an after-ripening process after harvesting, in which the falling number of the grain increases. Preferably, a flour according to the invention is obtained by storing the harvested grain kernel and/or having it after-ripen for some time and only grinding the grain after the falling number has reached a value of at least 250. The invention provides a flour of a grain, with the grain belonging to the genus *Eragrostis,* preferably grain of *Eragrostis tef,* characterized in that the falling number of the grain at the moment of grinding is at least 1.01 times higher (usually higher than 250) than at the moment of harvesting the grain, preferably at least 1.05 times higher (usually higher than 300), more preferably at least 1.20 times higher (usually higher than 320), and most preferably at least 1.30 times higher (usually higher than 380). As indicated hereinabove, the falling number of a flour according to the invention has a theoretical maximum of 600. Fig. 1 shows that flour with a falling number between 500 and 600 has very good baking qualities. The invention provides flour of *Eragrostis* spp. grain, with the grain having been ground at least 4, preferably at least 5, and more preferably at least 8 weeks after harvesting. Such a period is usually sufficient to obtain grain which has after-ripened sufficiently and has a falling number which meets the above-mentioned conditions. Particularly with larger amounts, in practice, the grain will virtually always be stored for some time before it is processed (ground). Teff can be stored in standard manners used for the storage of grains, for instance in (temperature-controlled) silos or towers or in a different suitable storage room such as a shed or barn. However, flour with a falling number according to the invention does not always need to be obtained by means of after-ripening. For instance, a Teff variety (or mixtures thereof) can be selected or generated whose grain already has a falling number of at least 250 at the moment of harvesting.

[0016] For making a gluten-free product, of course, during the process of harvesting, drying, transport, storage, grinding, mixing and packaging, adequate precautions need to be taken to prevent any mixing of Teff grain with non-gluten-free crop/seeds and/or flour. Thus, preferably, equipment and material (harvesting machines, transport means, storage rooms, millstones) are used which do not come into contact with gluten-containing crops. In order to be able to store grain so as to be free from decay, the grain preferably has a moisture content of at most 12%. It is therefore advisable to after-dry Teff grain before storage, preferably for a few days. The Teff grain is preferably stored in a closed storage room free from vermin. During after-ripening of Teff grain in cold areas, the falling number goes from an average of 230 immediately after harvesting, to 260 after four to five weeks to 330 two or three months after harvesting. In warmer areas, the after-ripening effect is different and, starting with an average falling number of 230 immediately after harvesting, a falling number higher than 420 may eventually be achieved.

[0017] The invention further provides the insight that traditional Teff flour does not only have a too low or a too high falling number to be processed into a good baking product, but that, in addition, it is usually not ground fine enough. The finer the flour, the better the flour can be baked. Flour according to the invention is preferably ground so fine that an essential (see below) part of the flour can pass through a sieve with a pore size of at most 150 microns, preferably at

most 120 microns, more preferably at most 100 microns. The grinding of Teff grain to a flour according to the invention can be carried out according to standard procedures for the preparation of flour. Preferably, a so-called pin mill with integrated cooling is used, so that the flour does not burn during grinding. For instance, of a flour according to the invention, 0% is blocked by a sieve with a pore size of 250 microns. Maximally 15% remains behind on a sieve with a pore size of 150 microns and maximally 20% when the pore size is only 100 microns (cumulatively approx 30%). So, minimally 70% of the Teff flour according to the invention passes a sieve with a pore size of 100 microns. Such a fine flour has been found to be particularly suitable for processing into a baking product. Without wishing to be bound to any theory, it is conceivable that the good baking qualities of such finely ground Teff flour are related to the fact that, due to the fine grinding, a relatively large surface is available for the absorption of water or a different liquid used for the preparation of a dough.

[0018] An additional advantage of flour according to the invention resides in the fact that, compared to other starch sources, *Eragrostis tef* is rich in minerals, such as calcium, zinc, magnesium, iron, phosphor and potassium. Flour according to the invention preferably contains at least 0.14%, preferably at least 0.15% calcium. Calcium is the most common mineral in our body. It is indispensable to the skeleton: bone contains 99% of the calcium in the body in the form of calcium phosphate and crystals which ensure the strength of the skeleton and the hardness of the teeth. Calcium also plays a role in numerous metabolic functions in the body.

[0019] A flour according to the invention contains at least 0.003% iron, preferably at least 0.004% iron, more preferably at least 0.005% iron. Iron is one of the most important elements in our body, particularly because it is a building block of hemoglobin and myoglobin. Hemoglobin is the red pigment of blood; myoglobin is mainly found in muscles. Hemoglobin is the substance in the blood which binds oxygen and transports it from the lungs to the cells. Further, iron is a component of various enzymes needed for a variety of metabolic processes in our body.

[0020] The consumption of food with a high iron content does not automatically result in an increase of iron in the body. This is because the intake of iron from food is a complex process and strongly depends on the form in which the iron is present in the food. Vegetable iron (Fe^{2+}) is usually taken in more poorly than animal iron (Fe^{3+}). In addition, the intake of iron is negatively affected by various other substances in our food. These are mainly mineral/metal-binding substances, such as tannins (*inter alia* in tea and walnuts), phytates (in grains), oxalates (*inter alia* in rhubarb), phosphates, caffeine (in coffee), polyphenols (in fruit), soy proteins, egg albumin and casein (in milk) which reduce the intake of iron from food. Flour according to the invention surprisingly contains relatively few if any of such mineral-binding substances. Hence, the invention provides flour which is suitable for preparing food, with the flour containing at most 0.8%, preferably at most 0.3%, more preferably at most 0.2% of a mineral-binding substance. Thus, compared to flours of frequently used other grains, a flour according to the invention contains only little (0.1 to 0.75%) phytic acid (myo-inositol hexa-kis-phosphate). Studies by Gies et al (S. Gies et al, *Comparison of screening methods for anaemia in pregnant women in Awassa, Ethiopia,* Tropical Medicine & International Health, 8 (4), 2003) have shown that anemia hardly occurs in those populations where Teff is an important part of the diet (S. Ketema, Tef *(Eragrostis tef): Breeding, genetic resources, agronomy, utilization and role in Ethiopian agriculture,* IAR, Addis Abeba, Ethiopia, 1993). The study found that the hemoglobin content of the blood of Ethiopian people who eat Teff was higher than that of non-Teff eaters. This is in all probability due to the high content of available iron in Teff.

[0021] In a preferred embodiment of the invention, at least two batches of different lots of Teff with different falling numbers are mixed and ground to obtain a flour with falling number in the optimal range, for instance with a falling number of at least 380-390 for preparing a backed product in accordance with the 'market standard'. The grain is preferably mixed such that it comprises different after-ripening stages, while, with material which has after-ripened for a long time, some addition of material which has after-ripened for a short time results in a better baking quality. Flour according to the invention can be obtained by grinding a mixture of grains, such as a mixture comprising Teff grains coming from different *Eragrostis* varieties. A mixture preferably comprises grains with different falling numbers. A grain mixture according to the invention preferably consists for 5-99% of a grain with a falling number higher than 400, more preferably higher than 420, most preferably higher than 450. For the remaining part, such a flour mixture may consist of a grain with a falling number lower than 400, preferably lower than 350. It has been found that flour mixtures comprising flour with a high falling number (approx 450-500) and a relatively low falling number (approx 300-350) have very good baking qualities. Thus, of a Teff mixture according to the invention consisting of approx 20% flour with falling number 450 and approx 80% flour with falling number 320, a bread can be baked which has risen and has been cooked well and has a flexible and elastic structure. The mixing of flours has a favorable effect on the stability of the flour and on the taste of the product (for instance bread) into which the flour mixture has been processed. The invention also provides a flour which has a stable falling number of at least 250, preferably at least 300, more preferably at least 340, most preferably at least 380 for a minimum of 3 weeks.

[0022] Further, a flour according to the invention may consist of a mixture of Teff flour according to the invention and flour of a different gluten-free crop or grain, such as potato, rice, corn, arrowroot, buckwheat or quinoa. A mixture can be obtained by grinding a grain mixture or by mixing flours of different, already ground grains or crops. This flour mixture can preferably be used for preparing (gluten-free) products. Further, a flour according to the invention can consist of a

mixture of Teff flour according to the invention and mixture of a gluten-containing grain, such as for instance wheat, barley, rye or oat. A mixture according to the invention can consist of flour of two, three, four, five or even more than five different (gluten-free or gluten-containing) grains or crops. The invention further provides the use of a flour or a mixture of flour (baking mix) according to the invention, for instance for preparing a dough or a batter. The invention provides dough or batter and use of dough or batter comprising Teff flour or a flour (mixture) according to the invention, characterized in that the falling number of the Teff grain at the moment of grinding is at least 250, preferably at least 300, more preferably at least 340, most preferably at least 380. Preferably, the falling number of the Teff grain at the moment of grinding is at least 1.01, preferably at least 1.05, more preferably at least 1.20 or even 1.30 times higher than at the moment of harvesting the grain. A very suitable flour (mixture) according to the invention has a falling number between 400 and 550 since this results in a dough or batter with very good baking qualities. Preferably, such a flour (mixture) consists of very finely ground grain kernels (e.g. >50% with a kernel size of maximally 100 microns) since this also has a positive effect on the baking qualities. Batter is a mixture of flour and liquid. Dough is a kneaded mixture of flour and a liquid, such as water, milk, beer or (olive) oil, and optionally other ingredients such as eggs, a leavening agent (such as yeast or baking powder) and a flavoring, such as salt. The mixture can be kneaded both manually and mechanically. A dough according to the invention comprises dough for the preparation of a wide range of (baked) food such as bread, pastry, cookies, pizza, pasta, noodles, etc. The invention also provides risen dough comprising a flour according to the invention. For this purpose, a mixture comprising flour according to the invention, a liquid and a leavening agent is kneaded to a dough according to the invention. Then, the dough is stored for some time under conditions which are favorable to rising, for instance in a draft-free, warm place. It has been found in practice that the amount of liquid which needs to be added to Teff flour in order to eventually obtain a good baking product is larger than normally used with different grains or flours (also see examples hereinbelow). Therefore, the processing of Teff will involve batter rather than dough.

[0023] A gluten-free dough according to the invention can be prepared from the Teff flour described hereinabove. A mixture of this Teff flour and flour of one or more other gluten-free crops, such as a mixture of Teff flour and buckwheat flour, rice flour, potato flour, arrowroot flour and/or corn flour is also suitable. The invention thus provides a flour which is gluten-free and which meets the demands on flour products of the modern western consumer. These products are suitable for all consumers and particularly for people with gluten intolerance. Such products contain less than 20 ppm, preferably less than 5 ppm, more preferably at most 1 ppm of gluten.

[0024] In addition, the invention provides a method for baking a product comprising the steps of: a) preparing a dough or batter by mixing a flour according to the invention with a liquid (for instance water, milk, beer or oil) and optionally a leavening agent; b) kneading this dough in a desired shape and c) heating the dough for some time.

[0025] With the use of a gluten-free flour according to the invention, and if, during preparation, contamination with a gluten-containing product is prevented, the invention further provides a method for baking a gluten-free product.

[0026] The invention provides a food product or a luxury food product comprising a flour according to the invention. A food product or luxury food product according to the invention may be both gluten-free and gluten-containing. The Teff flour component in such a flour comprises preferably at least 0.005% iron, at least 0.14% calcium, and at most 0.8% mineral (iron)-binding substances. The eventual concentration of these substances will depend on the amount of Teff flour used relative to the other components used. The food product or luxury food product may have a solid or a liquid form.

[0027] A food product according to the invention is, for instance, a baked product prepared according to a method of the invention, such as bread, pastry, cookies, crackers, biscuit, food bars, cornflakes, breadcrumbs, or a drink prepared from flour according to the invention. A food product or luxury food product according to the invention may also be prepared from unground grain belonging to the genus *Eragrostis,* preferably *Eragrostis tef,* characterized in that the falling number of the grain is at least 250, preferably at least 300, more preferably at least 340, most preferably at least 380. Such grain can be obtained by letting the grain after-ripen. An example of such a product is a(n) (alcoholic) drink such as beer prepared from Teff grain with a falling number of at least 250. Depending on the food application of the grain, grain with a particular falling number can be chosen.

[0028] Other examples are extruded products or dry dough products comprising dough according to the invention, for instance pastas (for instance macaroni, spaghetti, tagliatelle, lasagna, etc.) and noodles (vermicelli, thin Chinese noodles, chow mein, etc.). Due to the specific character of the Teff starches (it contains a large proportion of starch which is slowly digestible), the flour or a food product according to the invention is excellently suitable for the stimulation of the natural and thus desired flora in particularly the large intestine.

[0029] The invention further provides a pre-baked product comprising a flour according to the invention, such as pre-baked bread which can be baked off at home by the consumer. This pre-baked product is usually marketed as a (deep-) frozen product.

[0030] An advantage of food comprising a flour according to the invention is that Teff contains relatively high contents of health-promoting nutrients compared to other grains, such as wheat, barley and millet. This is *inter alia* due to the fact that the proportion of germ and brans in Teff grain is relatively large. For grains, carbohydrates form the most prominent component in the food. Sports nutrition consists preferably at least for 60% of carbohydrates in the form of

glucose (this is because they are most easily converted into energy). Carbohydrate sources can be categorized on the basis of their Glycemic Index (GI). The GI expresses itself in the elevation of the blood sugar level with a predetermined amount of a particular food product. Food products reach a GI reaction value of between 0 and 100, where white bread with a GI of 70 is used as a reference. Food products with a long absorption time (lower intake rate) are called 'low GI' food products (low GI means a GI lower than 55). Food products with a GI which is higher than 70 are called 'high GI' food products according to this method. For sportspeople, food with a high GI is, on the one hand, attractive, since it quickly results in available glucose. On the other hand, this initial elevation stimulates the secretion of insulin, so that the glucose level also quickly drops again. This problem is particularly known after eating pasta products, a source of carbohydrates which is very popular with sportspeople.

[0031] An unexpected advantage of food prepared from Teff flour according to the invention is that, although this food has a high GI, the glucose level remains high. These favorable properties of after-ripened Teff flour according to the invention are possibly the result of the relative proportions of free sugars and undigested sugars (starch) in Teff. It has been found that approx 20% (10-30%) of the carbohydrates in Teff belong to the rapidly degradable type, so that an initially high blood sugar level is obtained. However, about half (35-65%) of the carbohydrates belong to the slowly degradable type, causing a prolonged, constant conversion from starch into glucose. In this manner, the invention hence provides a food (such as pasta or a sports bar) which is very suitable for people, such as (endurance) sportspeople, who have a quick and prolonged need for carbohydrates. Such products are also referred to as "slow release energy" products. Such a food is also excellently suitable for people with overweight problems who want to control their weight by postponing the appetite. The invention also provides a food or luxury food containing Teff flour according to the invention which, *inter alia* thanks to the low content of mineral-binding substances and the 'slow carbohydrates' in Teff, has a positive effect on health. For instance, a food according to the invention has a positive effect on the prevention or treatment of (the symptoms of) anemia, diabetes and obesity. Particularly patients who suffer from diabetes type II have a need for slowly, gradually releasing carbohydrates/glucose.

[0032] The remaining amount of carbohydrates in Teff flour (approx 20-40%) are referred to as 'resistant' carbohydrates, because they are not converted into glucose by the digestive system. However, it has been found that these resistant carbohydrates are used as a food by microorganisms present in the intestine (intestinal flora), so that consuming products prepared from Teff flour has a favorable effect on the composition and vitality of the intestinal flora, such as it is, for instance, also obtained by consuming probiotics.

[0033] The above-mentioned percentages of the different types of carbohydrates in Teff flour are only indications, and the eventual content in products prepared with Teff flour will depend on the type of flour (which Teff varieties the grain comes from, how long it has after-ripened), whether mixtures of flours (with different Teff flour, with different gluten-free or gluten-containing flour) have been used and how the preparation of the product has taken place (baking time, temperature, additives).

[0034] The flour according to the invention, or the starch obtained therefrom, may also be used for different other applications. This is because the invention further provides a coating comprising flour according to the invention and food products which are at least partly provided with such a(n) (edible) coating, such as for instance cheese, French fries or peanuts.

[0035] In a further embodiment of the invention, a method is provided for binding a composition of at least two components, comprising the step of mixing these components with starch according to the invention. In relation to food, such thickening agents may, for instance, be used in soups and sauces. However, such a composition may also be used as a binding agent in a pharmaceutical composition such as a tablet, a capsule or a coated tablet. It is known that some medicines with binding agents based on gluten-containing starch cause problems for some celiac disease patients. By using starch of a gluten-free flour according to the invention (Teff flour optionally mixed with a different gluten-free flour), a method is now provided to obtain a composition which is also suitable for persons with a gluten intolerance. Also, such a starch can be used with advantage for binding a cosmetic composition, such as a facial powder.

[0036] In summary, it can be stated that the products and methods of the invention make it possible to provide food products with an eating value (taste, smell, texture, structure) acceptable in the western world which can be used as functional food. Particularly important are:

a) the gluten-free aspect, so that celiac disease patients have a whole new range of food products at their disposal;
b) the unique composition of the carbohydrates, so that the food products are excellently suitable as food for diabetes type II patients, endurance sportspeople and as diet food (postponing appetite);
c) the relatively large amount of 'resistant carbohydrates', so that the food products stimulate the intestinal flora;
d) the great amount of iron and the virtual absence of mineral-binding substances, so that anemia is prevented; and
e) the large amount of free minerals, such as Ca, Mg, Mn and K, which help with the rapid recovery of the body after a great physical achievement.

LEGEND

[0037]

Fig. 1 shows the relationship between the falling number of Teff flour and the quality of bread prepared with the flour as described in Example 1.

EXAMPLE 1

[0038] The relationship between the falling number of Teff flour and the baking quality was investigated by preparing a series of breads of Teff flour with different falling numbers in the range of 150 to 580 and then assessing the properties of the bread.

[0039] The standard baking test of Teff bread was carried out as follows, where the Teff flour was ground fine in a pin mill until minimally 70% of the Teff flour passed a sieve with a pore size of 100 microns:

Recipe:

[0040]

INGREDIENTS	WEIGHT PERCENTAGES	WEIGHT IN GRAMS
Teff flour	100.00	500.00
Citric acid	0.20	1.00
Chicken egg white powder	4.50	22.50
Water (30°C)	110.00	550.00
Yeast	6.00	30.00

Method:

[0041]

- Mix dry components
- Combine water and yeast in basin
- Add dry components to water/yeast mixture
- Make batter in beating machine
- Beat for two minutes in lowest acceleration
- Beat for approx three minutes in high acceleration
- Scoop batter into two cake tins of 450 grams
- Let batter rise to edge of cake tin
- Bake in oven of approx 235°C for approx 20 minutes
- Remove and cool

[0042] **Assessment of baking product:** Each dough/bread was assessed for color, batter firmness, rising speed, rising height, oven rise, baking nature, bread height, bread structure, smell and taste. The assessment is a weighed average on a scale of 1 to 10.

EXAMPLE 2

[0043] By way of illustration of the invention, this example show two formulations for the preparation of bread from a flour mixture of Teff flour and other flours.

White bread

[0044] 5000 g of Teff Bread Mix White, 3500 g of water (approx 30°C), 275 g of yeast, 275 g of margarine, 275 g of

olive oil. Ingredients of Teff Bread Mix White: Teff flour (41 wt.% with a falling number of 380 or more), corn starch, whole egg powder, tapioca flour, maltodextrin, soy flour, dextrose, salt, leavening agents (E500a, E450 or other stabilizers), citric acid (E330), emulsifiers and thickening agents (E412, E440, E466, E482).

Brown bread

[0045] 5000 g of Teff Bread Mix Brown + seeds, 3250 g of water (approx 30°C), 300 g of yeast, 300 g of margarine, 250 g of olive oil. Ingredients of Teff Bread Mix Brown + seeds: Teff flour (36%), corn starch, sunflower seeds, whole egg powder, linseed, sesame seed, tapioca flour, maltodextrin, soy flour, dextrose, salt, leavening agents (E500a, E450), citric acid (E330), emulsifiers and thickening agents (E412, E440, E466, E482).

[0046] **Method:** A batter was prepared in a planetary mixer with butterfly. The yeast was dissolved in water. All ingredients were slowly mixed for approx 2 minutes and intensively mixed for approx 7 minutes (highest acceleration). The batter was dosed in a tin and, after approx 35 minutes of after-rising, baked for approx 30 minutes at a temperature of approx 230°C. Rising time, oven temperature and baking time are indicative.

Example 3

TEFF GLUTEN-FREE 'SPRITS' (DUTCH SHORTCAKE COOKIE) PIECES

Recipe:

[0047]

INGREDIENTS	PERCENTAGES %	WEIGHT IN GRAMS
Teff flour (Teff Flour White)	100.00	1000.00
Margarine	95.00	950.00
Soft brown sugar	42.00	420.00
Grated lemon	5.00	50.00
Egg	30.00	300.00
Xanthan gum (E415)	0.50	5.00

Method:

[0048]

- Make a ground piping dough
- Stir butter until creamy
- Add soft brown sugar, grated lemon and egg and beat until smooth
- Mix Teff flour with xanthan gum and add in parts
- Pipe directly onto lightly greased plate, approx 4 cm wide
- Bake at approx 180°C
- Baking time approx 25-30 minutes
- Cut at approx 9 cm
- Remove
- Result approx 60 pieces, baked weight approx 30 grams per piece

[0049] The given oven temperature and baking time are indicative.

Example 4

TEFF BREAD ORIGINAL

Recipe:

[0050]

INGREDIENTS	PERCENTAGES %	WEIGHT IN GRAMS
Teff flour (Teff Flour White or Dark)	100.00	2000
Milk powder	4.00	80
Baking powder (karam Dethmers)	2.00	40
Salt	1.50	30
Sugar	2.00	40
Xanthan gum (E415)	0.50	10
CMC	1.00	20
Lecithin	1.00	20
Citric acid	0.30	6
Eggs	70.00	1400
Water (approx 30°C)	50.00	1000
Yeast	6.00	120
Margarine	7.00	140

Method:

[0051]

- Make a batter
- Mix dry components
- Combine water, eggs and yeast in basin
- Add dry components thereto
- Add margarine
- Beat for two minutes in lowest acceleration
- Beat for approx seven minutes in high acceleration
- Scoop or pour batter into tins
- Rising time approx 30 minutes (to just below the edge)
- Bake in oven of approx 235°C
- Baking time approx 25 minutes
- Remove and cool

[0052] The given rising time, oven temperature and baking time are indicative.

Example 5

TEFF GLUTEN-FREE CAKE, FILLED

Recipe:

[0053]

INGREDIENTS	PERCENTAGES %	WEIGHT IN GRAMS
Teff Flour (Teff Flour White)	100.00	1000
Margarine	100.00	1000
Granulated sugar	100.00	1000
Eggs	100.00	1000
Karam (baking powder Dethmers)	2.50	25
Grated lemon	8.00	80
Raisins (washed)	80.00	800

Method:

[0054]

- Method cold batter
- Beat margarine, sugar and grated lemon until light and fluffy
- Mix sieved baking powder through Teff flour
- Gradually admix eggs
- Spatulate raisins
- Fill cake tins approx 380 grams
- Bake at approx 160°C
- Baking time approx one hour
- Remove and cool

[0055] The given baking temperature and baking time are indicative.

Example 6

TEFF GLUTEN-FREE CAKE

Recipe:

[0056]

INGREDIENTS	PERCENTAGES %	WEIGHT IN GRAMS
Teff Flour (Teff Flour White)	100.00	1000
Margarine	100.00	1000
Granulated sugar	100.00	1000
Eggs	100.00	1000
Karam (baking powder Dethmers)	2.40	24
Grated lemon	8.00	80

Method:

[0057]

- Method cold batter

- Beat margarine, sugar and grated lemon until light and fluffy
- Mix sieved baking powder through Teff flour
- Gradually admix eggs
- Spatulate Teff mixture
- Fill cake tins approx 380 grams
- Bake at approx 160°C
- Baking time approx one hour
- Remove and cool

[0058] The given baking temperature and baking time are indicative.

Example 6

TEFF GLUTEN-FREE SPONGE CAKES

Recipe:

[0059]

INGREDIENTS	PERCENTAGES	WEIGHT
Teff Flour (Teff Flour White)	50.00	250.00
Corn starch	50.00	250.00
Granulated sugar	100.00	500.00
Eggs	80.00	400.00
Egg yolk	20.00	100.00
Grated lemon	4.00	20.00
Vulkaan (baking powder)	1.10	6.00

Method:

[0060]

- Method warm batter
- Stir sugar, eggs and grated lemon lukewarm and then whip until light and fluffy
- Mix sieved baking powder, Teff Flour and corn starch well
- Spatulate Teff mixture
- Pipe (nozzle 2) onto greased and floured plates
- Flour sponge cakes with powdered sugar
- Bake at approx 240°C on bottom plate!
- Baking time approx 5 minutes
- Remove and cool

[0061] The given oven temperature and baking time are indicative.

Example 7

TEFF GLUTEN-FREE 'KANO'S' (DUTCH ALMOND FINGERS) AND 'RONDO'S' (DUTCH ALMOND TARTLETS)

Recipe:

[0062]

INGREDIENTS	PERCENTAGES %	WEIGHT IN GRAMS
Teff Flour White or Dark	100.00	1000.00
Margarine	80.00	800.00
Soft brown sugar	65.00	650.00
Grated lemon	3.00	30.00
Egg	40.00	400.00
Karam (Dethmers)	0.60	6.00
Vulkaan (Dethmers)	0.40	4.00
Xanthan gum (E415)	0.50	5.00

Method:

[0063]

- Make a pastry
- Mix butter, soft brown sugar, grated lemon well
- Add egg
- Mix baking powders and xanthan gum with Teff Flour and add
- Mix the whole to a cohesive dough
- Cool well and process
- Dough is less suitable for mechanical processing
- Process into almond tartlet or almond finger
- Thickness of slices approx 5 mm
- Oven temperature approx 210°C
- Baking time approx 25-30 minutes

[0064] The given oven temperature and baking time are indicative.

Example 8

TEFF PANCAKES

Basic recipe:

[0065]

INGREDIENTS	PERCENTAGES %	WEIGHT IN GRAMS
Teff Flour	100.00	500.00
Vanilla sugar	3.00	15.00
Salt	1.00	5.00
Baking powder (karam Dethmers)	1.00	5.00
Xanthan gum (E415)	0.50	2.50
Milk	300.00	1500.00
Egg	20.00	100.00
Citric acid	0.20	1.00

Method:

[0066]

- Make a batter
- Mix dry components
- Milk and egg in a basin
- Add dry components
- Make lump-free batter
- Bake in desired shape
- Many variations possible!

Example 9

TEFF GLUTEN-FREE 'PORTUGEESJES' (DUTCH FRANGIPANE CAKES)

Recipe:

[0067]

INGREDIENTS	PERCENTAGES %	WEIGHT IN GRAMS
Teff Flour (Teff Flour White)	100.00	1000.00
Margarine	90.00	900.00
Soft brown sugar	90.00	900.00
Grated lemon	4.00	40.00
Xanthan gum (E415)	1.00	10.00
Egg	67.00	670.00
Egg yolk	33.00	330.00

Method:

[0068]

- Make a warm cake batter
- Whip eggs, egg yolk, soft brown sugar and grated lemon until light and fluffy
- Slowly mix the melted margarine through egg mass
- Mix xanthan gum through Teff Flour and spatulate well through mass
- Scrape down and spatulate again
- Pipe with a piping bag into lightly greased tins to just below the edge
- Bake in a oven of approx 220° C
- Baking time approx 10 to 12 minutes
- Remove and cool

[0069] The given oven temperature and baking time are indicative!

Example 10

TEFF BREAD, FILLED

Recipe:

[0070]

INGREDIENTS	PERCENTAGES %	WEIGHT IN GRAMS
Teff Flour (White or Dark)	100.00	2000
Milk powder	4.00	80
Baking powder (karam Dethmers)	2.00	40
Salt	1.50	30
Sugar	2.00	40
Xanthan gum (E415)	0.50	10
CMC	1.00	20
Lecithin	1.00	20
Citric acid	0.30	6
Eggs	70.00	1400
Water (approx 30 °C)	50.00	1000
Yeast	7.50	150
Margarine	7.00	140
Raisins	15.00	300
Currants	15.00	300
Browned pieces of hazelnut	10.00	200

Method:

[0071]

- Make a batter
- Mix dry components
- Combine water, eggs, and yeast in basin
- Add dry components
- Add margarine
- Beat for two minutes in lowest acceleration
- Beat for approx seven minutes in high acceleration
- Slowly admix raisins, currents and browned pieces of hazelnut
- Scoop or pour batter into tins
- Rising time approx 30 minutes (to just below the edge)
- Bake in oven of approx 235° C
- Baking time approx 25-30 minutes
- Remove and cool

[0072] The given rising time, oven temperature and baking time are indicative.

Example 11; composition, after-ripening and baking behavior of flour mixtures

				blends in percentages												
variety	after-ripening	falling number	assessment of bread	1	2	3	4	5	6	7	8	9	10	11	12	13
1	short	264	poor										10			
2	long	493	good									80	90			
3	short	184	v.poor									20				
4	medium	302	good	50	70											
5	long	473	good											70		
6	very long	529	good												60	
7	short	250	poor											20		
8	long	408	mediocre	50	30			60						10		
9	medium	331	mediocre						20							
10	short	287	mediocre						20						10	
11	long	265	good						30							
12	long	405	good						30							
13	long	409	good							85	70					
14	short	138	poor							15	30				20	
15	long	529	good			38	38									65
16	long	473	good			8										
17	short	250	poor			8	16									
18	medium	432	good			46	46									
19	medium	302	good					20								
20	long	267	mediocre					20							10	20
21	short	229	v. poor													15
			bread assessment	good		good					good					

Claims

1. A flour of a grain belonging to the genus *Eragrostis,* preferably *Eragrostis tef*, **characterized in that** the falling number of the grain at the moment of grinding is at least 250, preferably at least 300, more preferably at least 340, most preferably at least 380.

2. A flour according to claim 1, **characterized in that** the grain has after-ripened.

3. A flour according to claim 2, **characterized in that** the falling number of the grain at the moment of grinding is at least 1.01 times higher than at the moment of harvesting the grain, preferably at least 1.05, more preferably at least 1.20 and still more preferably at least 1.30 times higher.

4. A flour according to any one of the preceding claims, **characterized in that** the grain is gluten-free.

5. A flour according to any one of the preceding claims, wherein the grains has been ground at least 4, preferably at least 6, more preferably at least 8 weeks after harvesting.

6. A flour according to any one of the preceding claims, wherein the falling number of the grain at the moment of grinding is substantially stable for at least 2-3 weeks.

7. A flour according to any one of the preceding claims, wherein the grain is so finely ground that an essential part of the flour can pass through a sieve with a pore size of at most 150 microns, preferably at most 120 microns, more preferably at most 100 microns.

8. A flour according to any one of the preceding claims, wherein the grain contains at least 0.005% iron, and/or at least 0.14 % calcium, and/or at most 0.8% mineral-binding substance.

9. A flour according to any one of the preceding claims, wherein the flour comprises 10-30% rapidly degradable carbohydrates, 35-65% slowly degradable carbohydrates and 20-40% resistant carbohydrates, said percentages calculated relative to the total content of carbohydrates.

10. A flour according to any one of claims 1-9, wherein the grain comprises a mixture of grains.

11. A flour according to claim 10, wherein the mixture consists for 5-99% of flour of a grain with a falling number higher than 400, preferably higher than 420, more preferably higher than 450.

12. A flour according to claim 11, wherein, for the remaining part, the mixture consists of flour of a grain with a falling number lower than 400, preferably lower than 350.

13. A flour according to claim 10, wherein the mixture consists for 5-99% of grain which has after-ripened for a long time, preferably more than 4 weeks, more preferably more than 8 weeks, and, for the remaining part, consists of grain which has after-ripened for a short time, preferably fewer than 4 weeks, more preferably fewer than 2 weeks.

14. A flour comprising a flour according to any one of claims 1-13 mixed with flour of a gluten-free crop, preferably selected from the group comprising potato, corn, rice, arrowroot, buckwheat and quinoa.

15. A flour comprising a flour according to any one of claims 1-14 mixed with flour of a gluten-containing crop, preferably selected from the group comprising wheat, barley, rye and oat.

16. A dough or batter comprising flour according to any one of claims 1-15.

17. A gluten-free dough or batter comprising flour according to any one of claims 1-14.

18. A food product comprising flour according to any one of claims 1-15.

19. A method for baking a product comprising the steps of: a) preparing a dough or batter by mixing a flour according to any one of claims 1-15 with a liquid and, optionally, a leavening agent; b) kneading said dough in a desired shape; and c) heating the dough for some time.

20. A method for baking a gluten-free product, comprising: a) preparing a dough or batter by mixing a flour according to any one of claims 1-14 with a liquid and, optionally, a leavening agent; b) kneading said dough in a desired shape; and c) heating the dough for some time.

21. A baked product prepared according to the method of claim 19 or 20.

22. A gluten-free baked product according to the method of claim 20.

23. A baked product according to claim 21 or 22, wherein the product contains at least 0.005% iron, at least 0.14% calcium and at most 0.8% mineral-binding substance.

24. An extruded product comprising dough according to claim 16 or 17.

25. A coating comprising flour according to according to any one of claims 1-15.

26. A food product at least partly provided with a coating according to claim 25.

27. A food product or luxury food product prepared from unground grain belonging to the genus *Eragrostis,* preferably *Eragrostis tef,* **characterized in that** the falling number of the grain at the moment of the preparation is at least 250, preferably at least 300, more preferably at least 340, most preferably at least 380.

28. A method for binding a composition, preferably a pharmaceutical or a cosmetic composition, of at least two components, comprising the mixing of said components with starch of a flour according to any one of claims 1-15.

29. Use of a flour according to any one of claims 1-15 or a dough or batter according to claim 16 or 17.

Patentansprüche

1. Mehl eines Korns, das zur Gattung *Eragrostis* gehört, vorzugsweise *Eragrostis tef,* **dadurch gekennzeichnet, dass** die Fallzahl des Korns zum Zeitpunkt des Mahlens wenigstens 250, vorzugsweise wenigstens 300, besonders bevorzugt wenigstens 340 und am meisten bevorzugt wenigstens 380 beträgt.

2. Mehl gemäß Anspruch 1, **dadurch gekennzeichnet, dass** das Korn nachgereift ist.

3. Mehl gemäß Anspruch 2, **dadurch gekennzeichnet, dass** die Fallzahl des Korns zum Zeitpunkt des Mahlens wenigstens 1,01-mal so groß ist wie zum Zeitpunkt des Erntens des Korns, vorzugsweise wenigstens 1,05-mal, besonders bevorzugt wenigstens 1,20-mal und ganz besonders bevorzugt wenigstens 1,30-mal so groß.

4. Mehl gemäß einem der vorstehenden Ansprüche, **dadurch gekennzeichnet, dass** das Korn glutenfrei ist.

5. Mehl gemäß einem der vorstehenden Ansprüche, wobei die Körner wenigstens 4, vorzugsweise wenigstens 6 und besonders bevorzugt wenigstens 8 Wochen nach dem Ernten gemahlen wurden.

6. Mehl gemäß einem der vorstehenden Ansprüche, wobei die Fallzahl des Korns zum Zeitpunkt des Mahlens wenigstens 2-3 Wochen lang im Wesentlichen stabil ist.

7. Mehl gemäß einem der vorstehenden Ansprüche, wobei das Korn so fein gemahlen ist, dass ein wesentlicher Anteil des Mehls durch ein Sieb mit einer Porengröße von höchstens 150 μm, vorzugsweise höchstens 120 μm und besonders bevorzugt höchstens 100 μm treten kann.

8. Mehl gemäß einem der vorstehenden Ansprüche, wobei das Korn wenigstens 0,005% Eisen und/oder wenigstens 0,14% Calcium und/oder höchstens 0,8% mineralbindende Substanz enthält.

9. Mehl gemäß einem der vorstehenden Ansprüche, wobei das Mehl 10-30% schnell abbaubare Kohlenhydrate, 35-65% langsam abbaubare Kohlenhydrate und 20-40% resistente Kohlenhydrate umfasst, wobei die Prozentwerte relativ zum Gesamtgehalt an Kohlenhydraten berechnet sind.

10. Mehl gemäß einem der Ansprüche 1-9, wobei das Korn ein Gemisch von Kornsorten umfasst.

11. Mehl gemäß Anspruch 10, wobei das Gemisch zu 5-99% aus einem Mehl eines Korns mit einer Fallzahl von über 400, vorzugsweise über 420 und besonders bevorzugt über 450 besteht.

12. Mehl gemäß Anspruch 11, wobei der Rest des Gemischs aus Mehl eines Korns mit einer Fallzahl von weniger als 400, vorzugsweise weniger als 350, besteht.

13. Mehl gemäß Anspruch 10, wobei das Gemisch zu 5-99% aus Korn besteht, das während einer langen Zeit, vorzugsweise mehr als 4 Wochen, besonders bevorzugt mehr als 8 Wochen nachgereift ist, und der Rest aus Korn besteht, das nur kurze Zeit, vorzugsweise kürzer als 4 Wochen, besonders bevorzugt kürzer als 2 Wochen, nachgereift ist.

14. Mehl, das ein Mehl gemäß einem der Ansprüche 1-13 umfasst, das mit Mehl einer glutenfreien Feldfrucht gemischt ist, die vorzugsweise aus der Gruppe ausgewählt ist, die aus Kartoffel, Mais, Reis, Pfeilwurz, Buchweizen und Quinoa besteht.

15. Mehl, das ein Mehl gemäß einem der Ansprüche 1-14 umfasst, das mit Mehl einer glutenhaltigen Feldfrucht gemischt ist, die vorzugsweise aus der Gruppe ausgewählt ist, die aus Weizen, Gerste, Roggen und Hafer besteht.

16. Teig oder Rührteig, der Mehl gemäß einem der Ansprüche 1-15 umfasst.

17. Glutenfreier Teig oder Rührteig, der Mehl gemäß einem der Ansprüche 1-14 umfasst.

18. Nahrungsmittel, das Mehl gemäß einem der Ansprüche 1-15 umfasst.

19. Verfahren zum Backen eines Produkts, das die folgenden Schritte umfasst: a) Herstellen eines Teigs oder Rührteigs durch Mischen eines Mehls gemäß einem der Ansprüche 1-15 mit einer Flüssigkeit und gegebenenfalls einem Treibmittel; b) Kneten des Teigs in einer gewünschten Form; und c) Erhitzen des Teigs während einer bestimmten Zeit.

20. Verfahren zum Backen eines glutenfreien Produkts, umfassend: a) Herstellen eines Teigs oder Rührteigs durch Mischen eines Mehls gemäß einem der Ansprüche 1-14 mit einer Flüssigkeit und gegebenenfalls einem Treibmittel; b) Kneten des Teigs in einer gewünschten Form; und c) Erhitzen des Teigs während einer bestimmten Zeit.

21. Backware, hergestellt nach dem Verfahren von Anspruch 19 oder 20.

22. Glutenfreie Backware, hergestellt nach dem Verfahren von Anspruch 20.

23. Backware gemäß Anspruch 21 oder 22, wobei das Produkt wenigstens 0,005% Eisen, wenigstens 0,14% Calcium und höchstens 0,8% mineralbindende Substanz enthält.

24. Extrudiertes Produkt, das Teig gemäß Anspruch 16 oder 17 umfasst.

25. Beschichtung, die Mehl gemäß einem der Ansprüche 1-15 umfasst.

26. Nahrungsmittel, das wenigstens zum Teil mit einer Beschichtung gemäß Anspruch 25 versehen ist.

27. Nahrungsmittel oder Luxusnahrungsmittel, das aus ungemahlenem Korn hergestellt ist, das zur Gattung *Eragrostis* gehört, vorzugsweise *Eragrostis tef*, **dadurch gekennzeichnet, dass** die Fallzahl des Korns zum Zeitpunkt der Herstellung wenigstens 250, vorzugsweise wenigstens 300, besonders bevorzugt wenigstens 340 und am meisten bevorzugt wenigstens 380 beträgt.

28. Verfahren zum Binden einer Zusammensetzung, vorzugsweise einer pharmazeutischen oder kosmetischen Zusammensetzung, von wenigstens zwei Komponenten, umfassend das Mischen der Komponenten mit Stärke eines Mehls gemäß einem der Ansprüche 1-15.

29. Verwendung eines Mehls gemäß einem der Ansprüche 1-15 oder eines Teigs oder Rührteigs gemäß Anspruch 16

oder 17.

Revendications

1. Farine d'un grain appartenant au genre *Eragrostis,* de préférence, *Eragrostis tef*, **caractérisée en ce que** l'indice de chute du grain au moment du broyage est d'au moins 250, de préférence, d'au moins 300, plus préférablement, d'au moins 340, et de manière préférée entre toutes, d'au moins 380.

2. Farine selon la revendication 1, **caractérisée en ce que** le grain est au stade d'après-maturation.

3. Farine selon la revendication 2, **caractérisée en ce que** l'indice de chute du grain au moment du broyage est au moins 1,01 fois supérieur à celui au moment de la récolte du grain, de préférence, au moins 1,05, plus préférablement, au moins 1,20 fois et plus préférablement encore, au moins 1,30 fois supérieur.

4. Farine selon l'une quelconque des revendications précédentes, **caractérisée en ce que** le grain est sans gluten.

5. Farine selon l'une quelconque des revendications précédentes, dans laquelle les grains ont été broyés au moins 4, de préférence, au moins 6, plus préférablement, au moins 8 semaines après la récolte.

6. Farine selon l'une quelconque des revendications précédentes, dans laquelle l'indice de chute du grain au moment du broyage est essentiellement stable pendant au moins 2-3 semaines.

7. Farine selon l'une quelconque des revendications précédentes, dans laquelle le grain est si finement broyé qu'une partie essentielle de la farine peut passer à travers un crible ayant une taille de mailles d'au plus 150 microns, de préférence, d'au plus 120 microns, plus préférablement, d'au plus 100 microns.

8. Farine selon l'une quelconque des revendications précédentes, dans laquelle le grain contient au moins 0,005 % de fer, et/ou au moins 0,14 % de calcium, et/ou au plus 0,8 % d'une substance se liant à un minéral.

9. Farine selon l'une quelconque des revendications précédentes, dans laquelle la farine comprend de 10 à 30 % de glucides à dégradation rapide, 35 à 65 % de glucides à dégradation lente et 20 à 40 % de glucides résistants, lesdits pourcentages étant calculés par rapport à la teneur totale en glucides.

10. Farine selon l'une quelconque des revendications 1 à 9, dans laquelle le grain comprend un mélange de grains.

11. Farine selon la revendication 10, dans laquelle le mélange se compose de 5 à 99 % de farine d'un grain ayant un indice de chute supérieur à 400, de préférence, supérieur à 420, plus préférablement, supérieure à 450.

12. Farine selon la revendication 11 dans laquelle, pour le reste, le mélange se compose de farine d'un grain ayant un indice de chute inférieur à 400, de préférence, inférieur à 350.

13. Farine selon la revendication 10, dans laquelle le mélange se compose de 5 à 99 % d'un grain récolté longtemps après maturation, de préférence, plus de 4 semaines, plus préférablement, plus de 8 semaines, et pour le reste, se compose d'un grain récolté peu après maturation, de préférence, moins de 4 semaines, plus préférablement, moins de 2 semaines.

14. Farine comprenant une farine selon l'une quelconque des revendications 1 à 13 mélangée avec une farine d'une culture sans gluten choisie, de préférence, dans le groupe comprenant la pomme de terre, le mais, le riz, l'arrow-root, le sarrasin et le quinoa.

15. Farine comprenant une farine selon l'une quelconque des revendications 1 à 14 mélangée avec une farine d'une culture contenant du gluten choisie, de préférence, dans le groupe comprenant le blé, l'orge, le seigle et l'avoine.

16. Pâte comprenant la farine selon l'une quelconque des revendications 1 à 15.

17. Pâte sans gluten comprenant la farine selon l'une quelconque des revendications 1 à 14.

18. Produit alimentaire comprenant la farine selon l'une quelconque des revendications 1 à 15.

19. Procédé de cuisson d'un produit comprenant les étapes consistant à : a) préparer une pâte en mélangeant une farine selon l'une quelconque des revendications 1 à 15 avec un liquide et, éventuellement, un levain ; b) pétrir ladite pâte pour obtenir une forme souhaitée ; et c) chauffer la pâte pendant un certain temps.

20. Procédé de cuisson d'un produit sans gluten, comprenant les étapes consistant à : a) préparer une pâte en mélangeant une farine selon l'une quelconque des revendications 1 à 14 avec un liquide et, éventuellement, un levain ; b) pétrir ladite pâte pour obtenir une forme souhaitée ; et c) chauffer la pâte pendant un certain temps.

21. Produit cuit préparé selon le procédé de la revendication 19 ou 20.

22. Produit cuit sans gluten selon le procédé de la revendication 20.

23. Produit cuit préparé selon la revendication 21 ou 22, dans lequel le produit contient au moins 0,005 % de fer, au moins 0,14 % de calcium, et au plus 0,8 % d'une substance se liant à un minéral.

24. Produit extrudé comprenant la pâte selon la revendication 16 ou 17.

25. Enrobage comprenant la farine selon l'une quelconque des revendications 1 à 15.

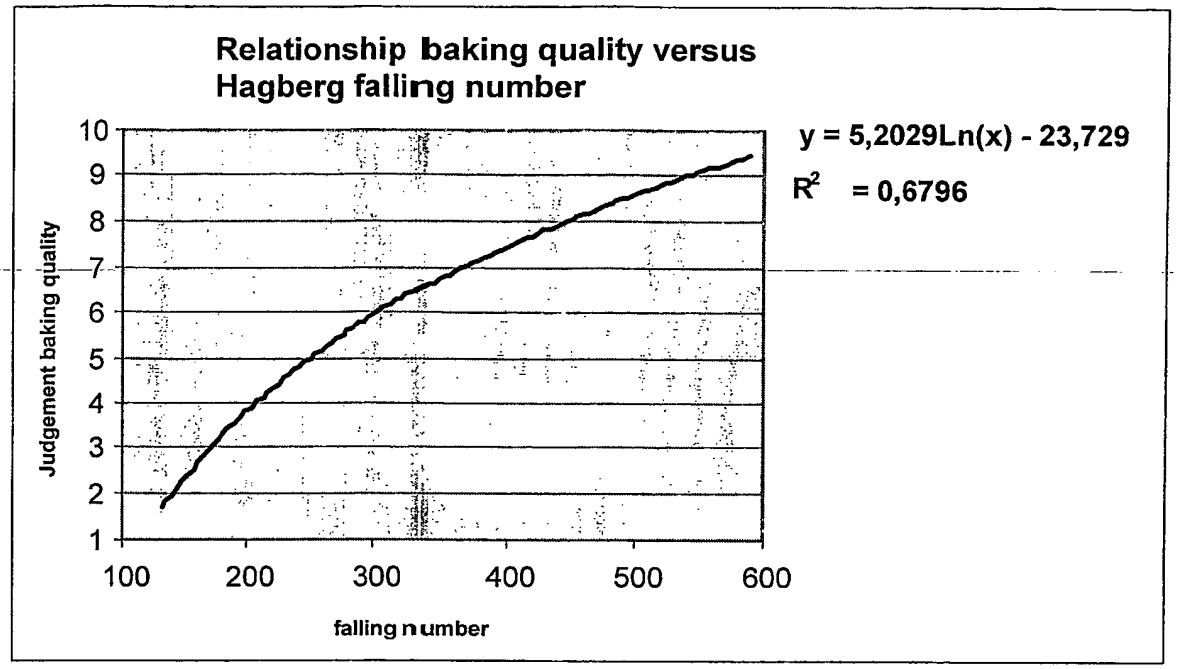
26. Produit alimentaire au moins partiellement pourvu d'un enrobage selon la revendication 25.

27. Produit alimentaire ou produit alimentaire de luxe préparé à partir d'un grain non broyé appartenant au genre *Eragrostis,* de préférence, *Eragrostis tef*, **caractérisé en ce que** l'indice de chute du grain au moment de la préparation est d'au moins 250, de préférence, d'au moins 300, plus préférablement, d'au moins 340, et de manière préférée entre toutes, d'au moins 380.

28. Procédé pour lier une composition, de préférence, une composition pharmaceutique ou cosmétique, d'au moins deux composants, comprenant l'étape consistant à mélanger lesdits composants avec l'amidon d'une farine selon l'une quelconque des revendications 1 à 15.

29. Utilisation d'une farine selon l'une quelconque des revendications 1 à 15 ou d'une pâte selon la revendication 16 ou 17.

Figure 1


Relationship baking quality versus
Hagberg falling number
y = 5,2029Ln(x) - 23,729
R2 = 0,6796
Judgement baking quality
falling number
10
9
8
7
6
5
4
3
2
1
100
200
300
400
500
600