Global Compact
Network Georgia

SUSTAINABLE FARMING STANDARDS

Guideline for Hazelnut Growers in Georgia

This Guideline was created in partnership with the Georgian Hazelnut Growers Association and the Ministry of Environmental Protection and Agriculture of Georgia. The uthors would like to extend their gratitude towards the representatives of both institutions for their support and engagement. ProFound – Advisers in Development provided consultancy and international expertise in drafting the guideline.

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This Guideline was created by the Global Compact Network Georgia in collaboration with the Ministry of Environment Protection of Georgia and Georgian Hazelnut Growers Association, with assistance from the Swedish Government. The contents of the Guideline are the sole responsibility of the Global Compact Network.

SUSTAINABLE FARMING STANDARDS

Guideline for Hazelnut Growers in Georgia

FOREWORD

In recent years Georgia has made significant progress in the hazelnut sector. In addition to significant support from the state and international organizations for sector development, farmer coordination has made the greatest contribution to this progress. This high level of self-organization, in turn, was achieved through the active work of the Georgian Hazelnut Growers Association. The Association is fully focusing its resources on promoting the development of the sector, which has allowed us to provide each farmer with important information on efficient and safe production.

Communication with farmers is the foundation for ensuring products are traceable and trustworthy. When we talk about sustainable production in agriculture, an important factor is traceability and reliability; Responsible entrepreneurship and, therefore, production refers to the production site and conditions, environmental impact, use of workforce and social factors. The Hazelnut Growers Association has a defined structure which ensures the process of correct and rapid communication with each farmer. We receive complete information on how production takes place from the start of the season to storage and processing. Information about the steps taken at all stages is collected by the Association.

The Ministry of Environmental Protection and Agriculture is a party to this process, providing financial, technological, environmental and social support. I would like to emphasize that sustainable production is becoming an integral part of the modern world. The coordination of farmers in agriculture is an important component for sustainable production and sector development. This type of self-organization eliminates many risks that exist in agricultural production and are very relevant today.

Finally, I would like to mention that hazelnuts, along with wine, are the main export products in Georgia. About 60,000 farmers are involved in this sector; more than 20,000 of them are united in the Association, which plays an important role in establishing the image of Georgian hazelnuts on the international arena. The sustainable production principles are of particular importance in the EU countries. Accordingly, the model introduced by the Hazelnut Growers Association is an opportunity to share experience in direct production and legislation, as well as to make progress in the hazelnut sector irreversible.

LEVAN DAVITASHVILI

Minister of Environmental Protection and Agriculture of Georgia

FOREWORD

Hazelnut is leading a agricultural commodity for Georgia, we exported 50,000 tonnes of hazelnut last year. It is also important to mention that Georgia is one of the 5 biggest producers of hazelnut in the world, has its own endemic species, and more than 70,000 farmer families are benefiting from this commodity. Our hazelnut is already present on the EU, US and Chinese markets. However, we still have a road to go until we can have a fixed position and share of premium price markets.

GHGA has chosen adherence to Sustainable Farming Standards as a way to tackle competition on the global hazelnut market, we have stable and well-established structure, that provides an opportunity to control quality, source traceable hazelnuts, prevent child labor and misuse of chemicals. Our target is to increase income for families of our member farmers, through efficient use of land, linking Georgian hazelnut sector to final consumer and minimizing the middlemen impact on market development.

Our declared target is to reach 150,000 tonnes in the coming 10 years and mainly by focusing on increasing the yield and efficiency of existing plantations rather than cultivating new land. We aim to differentiate Georgian hazelnut not only by quality but also by certifying its sustainable production through the whole cycle.

GHGA has elaborated the Sustainable Farming Standards with the support of Global Compact Georgia and the Ministry of Environment and Agriculture that are declared in present document and will be the precondition of associating in GHGA for existing and new members, as well as for our partner organizations.

MERAB CHITANAVA

Chairman of Executive Board
Georgian Hazelnut Growers Association (GHGA)

FOREWORD

UN Global Compact aims at establishing responsible business conduct and achieving the UN Sustainable Development Agenda through private sector participation. Enterprises in the agriculture sector hold a significant place among the various field representatives, engaged in the UN Global Compact initiative.

We have made significant progress with the Georgian Hazelnut Growers Association in promoting responsible and sustainable practices. The Farming Standards elaborated hereby will support both the improvement of product quality and the socio-economic empowerment of local communities.

Sustainable Farming Principles cover hazelnut growing process, as well as its market placement. They aim to assist farmers with respect to human rights, environmental protection and integrity governance issues, and to establish responsible practices. Implementing this standard will be a significant step in supporting the export of local goods to the European market.

I would like to express gratitude towards the Ministry of Environment Protection and Agriculture of Georgia for supporting the initiative and extend it to the Georgian Hazelnut Growers Association for productive collaboration.

SALOME ZURABISHVILI

Executive Director

Global Compact Network Georgia

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INTRODUCTION

Hazelnuts are one of the most rapidly developing cultures in Georgia. The hazelnut sector has brought Georgia to a leading position on the global hazelnut market and generates a high net income for farmers while supporting local social and economic development. However, there is no systemic approach on how to farm sustainably in this field, as the regulations, standards, and practices that are in place offer only a fragmented approach to sustainability. The main goal of this Guideline is to investigate these practices and regulations to produce a set of principles, which brings existing good practices in systemic order and provides additional guidance on how to improve the standards that fall short of sustainability.

Global Compact Network Georgia partnered with the Georgian Hazelnut Growers Association to establish the Sustainable Farming Standards in the field based on the existing regulatory framework and best international practices. There are multiple standards and principles established by various organizations, however, the aim of the Guideline is to provide the Georgian hazelnut sector with knowledge about approaches tailored to them. With support from various actors, primarily from farmers and traders, this Guideline lays out eight principles of sustainable hazelnut farming. Many of them have already been in place in Georgia or are currently being promoted, making it easy for farmers, crackers, traders or other business operators engaged in primary hazelnut production to declare their readiness to uphold them. At the same time, these principles are based on best international practices, various sustainability agendas, standards, regulations or initiatives.

It is noteworthy that the largest market to where Georgian hazelnuts are exported is the European Union. The EU prioritizes sustainable agriculture. Furthermore, consumers in the EU have long requested more sustainable practices from the food industry and in response, the industries and traders from the Union also request products that are sustainably produced. Additionally, the Association Agreement between the EU and Georgia obligates Georgia to put in place mechanisms to promote and ensure sustainability.

The principles set out here shall support farmers, crackers, traders or other business operators abide by such regulations and in doing so help them obtain easier market access. As mentioned above, many operators may already have these practices in place, however, by openly declaring their dedication to sustainable farming standards, implementing them in a more comprehensive manner, keeping records or tracking their performance and directly reporting or otherwise communicating on their progress will increase their reputation and thus result in higher trust towards Georgian hazelnuts, which has been a challenge over the past years.

Hazelnuts are one of the traditional cultures in Georgia, however agricultural practices are not

advanced and modern methods are still being created. When new practices or approaches are established such as pest control, soil fertilization, resource consumption, the stakeholders (the Ministry of Agriculture, National Food Agency, Rural Development Agency, the GHGA or others) bear sustainability in mind. These principles are based on up-to-date and modern practices taking into consideration the international framework and Georgia's laws, policies and practical context.

These principles are interrelated, and should be understood and approached as a whole. Practical guidance given below will enable these links to be found and strong practice established, bearing in mind the differences between actors in hazelnut production. Small, medium, and large farmers, crackers and traders are all different and there is no “one size fits all” formula for sustainability. The principles as a whole apply to all these actors in the supply chain, but some principles are more relevant and applicable to certain actors. Each principle and its respective guidance shall demonstrate how to apply specific requirements based on the various actors of the supply chain.

The sustainable hazelnut farming principles are primarily focused on primary production, however some of them are connected to processing and marketing, particularly with respect to traceability.

The principles are based on Georgian and international laws, standards (Part II goes into them in detail), while the Guidebook provides practical explanations and approaches based on international and Georgian best practice (this document is further annexed with information on materials used in the process, which could be useful for learning more on these Principles).

All principles have common goals: better farming, better quality, better market access, better social value.

These goals transcend through the principles and relevant actions, the hazelnut community – farmers, crackers, traders and other stakeholders – come together to acknowledge and implement these principles to ensure they farm sustainably to receive a better quality product, which will enjoy higher demand and a competitive global price, resulting in higher income for both individuals and communities at large.

Each principle includes a scope of application (pre-harvest, harvest, post-harvest), to help the relevant operators (farmer, cracker, trader) focus on topics relevant to their field. The principle is first reviewed, which is then followed by key actions (understanding key elements), which are then elaborated on further in a descriptive part (what does it mean?) to provide the meaning and a better understanding of these actions. Finally, each principle has guidance (how to implement in practice?) with recommendations, which are based on existing Georgian and international practice and which will allow farmers to see more practical ways to implement the principles. All principles also have indication of the SDGs they apply to, helping operators better understand their impact on the global or national Sustainable Development Agenda.

These principles took into consideration authoritative standards and certification programs, adapting them to the Georgian reality, challenges, needs and opportunities. Resources used for the Guidebook include, among others: UTZ, Rainforest Alliance, GLOBALG.A.P., BRCGS and the Sustainable Agriculture Network.

SUSTAINABLE FARMING PRINCIPLES

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1 PRINCIPLE

IMPLEMENT RESPONSIBLE AGRICULTURE PRACTICES

Agricultural processes include all steps from planting till harvesting and have significant impact on human health and environment, which is why farmers should ensure they act responsibly in pest control, disease prevention and treatment. These key actions shall guide farmers towards safer and more sustainable approaches.

SDG IMPACT
2|3|6|12|15

SCOPE OF APPLICATION

- ■ Pre-Harvest
- ■ Harvesting
- ■ Post-Harvest

UNDERSTANDING KEY ELEMENTS OF THE PRINCIPLE

ACTION 1.

Use agrochemicals responsibly and with the least damage to nature and health

1. Steps taken for pest and disease control should only be done with conformity to local regulations
2. Any chemical product used, including fertilizers, should be permitted by the EU
3. Chemical products shall be used only when non-chemical alternatives are not available or useful
4. All chemical product applications shall be reduced to the minimum
5. Organic inputs shall be prioritized using the most efficient methods
6. Farmers should strive to use integrated pest management systems

ACTION 2.

Exclude GMO or GMO-based practices

ACTION 3.

Preserve biodiversity

1. Use technologies and approaches that do not damage endemic products
2. Maintain on-farm natural vegetation
3. Select planting material carefully - based on resistance, expected yield, input requirements, market demands, adoption of local, geographic and ecological and agronomical conditions
4. Do not encroach onto forests or other natural ecosystems
5. Promote endemic species

ACTION 4.

Maintain farm through ustainable approaches

1. Apply pruning practices for optimal plant structure
2. Renew tree crops adequately
3. Control weeds as necessary
4. Make sure harvesting is done in a timely manner and free from contamination
5. Where available, use materials from within the ecosystem – irrigation, pollinators, manure, etc.

ACTION 5.

Protect soil, water, and air

1. Optimize fertilizer use, improve soil coverage, use only mineral and natural fertilizers
2. Avoid soil erosion and environmental pollution
3. Use water efficiently and responsible wastewater practices
4. Do not use systemic herbicides
5. Establish responsible drainage and irrigation practices

ACTION 6.

Strive to abide by organic farming principles set down by law and international standards

WHAT DOES IT MEAN?

Agricultural practices account for the largest volume of activities in hazelnut farming and include the highest risk of negative impacts on human health and environment. Hazelnut farming in Georgia cannot completely eliminate the use of chemical products, since pests in the country damage not just the quality and yield, but also pose health threats (*e.g.,* stink bugs transfer diseases affecting humans too) and if not dealt with in a timely manner can cause irreversible environmental, healthcare and economic damage.

Therefore, farmers need to manage their crops carefully. This is important not only to human health and the environment, but also to reduce costs of farming and production, as excessive pest control is costly and if not done responsibly, can result in product rejection/recall on the market.

The European Union provides rather comprehensive information for products that are safe to be used in farming, most of this information is available from the National Food Agency as well as the GHGA, and farmers should make all attempts to obtain information on all pesticides, fungicides, herbicides or other products they intend to use and ensure that all products they use are permissible

by the EU. Such an approach will also ensure the possibility of exporting to EU member states and, therefore, fair and competitive price for Georgian hazelnuts.[1]

Genetically modified organisms (GMO) are not common in Georgian hazelnut farming practices. However, with the rapid development of genetic modifications, there is the possibility of altering hazelnuts. Since most consumers and therefore traders reject GMO products especially if there are alternatives, GMOs should be avoided whenever possible.

Organic hazelnut farming in Georgia is rather problematic due to the high number of resilient pests (particularly the stink bug), which cannot be efficiently dealt with by non-chemical products. However, organic farming principles do not necessarily exclude all chemical product use. Pursuant to the Georgian legislation and international practices, organic farming principles allow the use of non-organic products if the use of organic products poses a threat to the environment and human health. Thus, with meticulous assessment and care, achieving organic farming of hazelnut may be possible. This action does not obligate farmers to completely shift their practices, however it does aim at striving towards organic production and pushing their existing practices mostly in line with it.

Biodiversity is one of the most prominent issues in the Georgian context. Currently, there are 18 species of hazelnut common in Georgia. Three of them are used for farming, two of which are endemic.[2] It is vital that farmers ensure these species are preserved. Farmers should also select correct varieties for new planting based on resistance, expected yield, input requirements, market demands, local, geographic and ecological, and agronomical conditions; it is recommended that at least one other variety of hazelnut trees needs to be interplanted amongst the main variety.

At the same time, small and some medium-size hazelnut farms are either in proximity with other crops or are in the vicinity of them, including also endemic plants (grains, vines, vegetables, etc.). Therefore, farmers should make sure they do not negatively impact such plants, however intercropping of different hazelnut species is considered a good practice. No production should be done in or within 2 km of a protected area unless it is allowed under a management plan of the area.

Georgian hazelnuts are almost never planted as a result of deforestation practice, as existing agricultural lands are used for production. Moreover, hazelnut plantations frequently replace tea, vegetables and grains which puts more strain on the environment.[3] Thus, instead of fields, or land-degrading plants (tea, for instance, requires much more non-organic fertilizers and herbicides), hazelnut farms represent tree-planted areas which have a positive impact on the environment. However, with increased demand, there is a risk that hazelnut farms may encroach on forests in the vicinity, resulting in adverse impacts on the local and even regional environment. Principle 1 aims to promote the preservation of forests and encourages farmers to use alternative means when expanding rather than deforestation or altering existing natural ecosystems.

Farm management issues are important to a high quality outcome as well; thus, it is advisable to include responsible and sustainable approaches in the process. Farmers in Georgia may obtain advice and support from National Food Agency and GHGA on most efficient practices, however the following issues should be kept in mind:

- Pruning should happen once a year to obtain optimal tree structure and health – shoots and branches that have dried, are dense, unproductive, or unnecessary, should be removed
- Orchards should be reasonably clear from weeds prior to harvesting to facilitate the process (see Principle 2. Use Resources in an Environment-Friendly Manner, for more guidance on pruning and weed control in energy-efficient and eco-friendly way)
- When harvesting time comes, all livestock and poultry should be removed at least one month before, to avoid contamination
- Collecting hazelnuts in a timely manner is vital to prevent them from getting wet or exposed to contamination, and this also helps minimize risks of aflatoxin development – nuts should be picked within 3 days from falling
- Collected yield should be cleaned in a timely manner to be free from foreign matter or sick/moldy hazelnuts

Hazelnuts in Georgia are most common in western Georgia (with high natural humidity) and some eastern Georgian regions (low humidity). Thus, in some cases, there is a need for irrigating land plots (particularly in Kakheti). Local practice demonstrates that farmers frequently use natural irrigation methods with limited impact on the ecosystem.

[1] Pesticides permitted by the EU is provided on this database: https://ec.europa.eu/food/plant/pesticides_en, EU has also updated regulations for fertilizers, which is analyzed in the Part I of these Guideline.

[2] Source: Meeting with GHGA representatives, April 22, 2021. More on endemic species of hazelnut in Georgia can be found in Hazelnut Production Manual, UNDP, SCO, 2016, pp. 12-25, available here: http://www.undp.org/content/dam/georgia/docs/publications/UNDP_GE_ED_Hazelnut_Production_manual_201604.pdf

[3] Source: Meeting with GHGA representatives, April 22, 2021.

Another common practice amongst small or medium farmers is mixing several plants, supporting natural fertilizing processes through vegetable or other plants, which become humus. Last but not least, the practice of fertilizing through manure and local minerals is common. Small farmers frequently use manure from their own family resources; larger farmers purchase them, however manure is not widely available in Georgia.

Hazelnuts in Georgia need fertilizing, especially to balance soil pH levels. This is particularly important when farms are developed on lands where other cultures were grown (for instance, in western Georgia, hazelnuts are often grown on lands used for tea plantations, which results in soil acidification), which requires further balancing. In most cases fertilizers used in practice are mineral based and thus sustainable, however chemical fertilizers are also available and farmers should avoid them.

Irrigation (and in some western Georgian regions drainage) is also important to hazelnut farming. There are multiple state programs supporting farmers in establishing good irrigation practices, while irresponsible water use may cause not only the waste of water, but also higher costs and degraded quality of harvest (high humidity, which cannot be easily dried, and yield is low). Sustainable water use, particularly for small and medium-sized farms (where drip irrigation is not always the practice), could also be an issue, especially in areas where water is not subject to laws of local systematic use and farmers do not pay for water use (nothing balances excessive use).

Herbicides used in Georgian hazelnut farming are rarely systemic, since such herbicides also drastically damage the soil and hazelnut trees themselves, however as it has a strong short-term effect, farmers may be lured into using them. It is also preferrable to use mulchers instead of herbicides, however, not all farms are accessible for mulching machines (due to landscape or plant formation).

HOW TO IMPLEMENT IN PRACTICE?

Considering Georgian environmental conditions (in both the western and eastern parts of the country), the pests that are most widespread and the species of hazelnuts used in farming, there are specific approaches that can ensure responsible **agricultural practices:**

Firstly, a careful risk assessment should be conducted – assessing the pests and diseases that threaten hazelnuts each particular year, assessing the volume and methods of treatment and their risks to the environment (including soil, water, air, plant and animal life) and human health. This can be conducted with the help from a GHGA expert, family farms can also contact the GHGA or National Food Agency and find out about the general agricultural context of the location of their orchards.

Once the assessment is finalized and local regulations and recommendations have been considered, treatment products and methods should be selected. Farmers should ensure a balance between the risks and these products/methods, and recommendations available from state agencies or associations (such as the GHGA) should be taken into consideration, as they are based on sustainable practices.

GOOD PRACTICE

One of the most efficient method for combating the stink bug, for example, is using pheromones (an organic product) on sentinel trees, away from farms and animals, which is then fumigated with chemicals.

Rarely there are pesticides and fungicides on the market which can include toxic contaminants (heavy metals, such as lead, or excessive amounts of chemicals). Farmers should ensure that any product they use is permitted in the EU; this information can be obtained from the National Food Agency and/or the GHGA.

If farmers have access to organic products, they should be prioritized. Frequently organic products can be mixed with chemical products to reduce the use of chemicals to the lowest extent.

A specific schedule for fumigation should be followed – this ensures efficiency of the practice and at the same time allows farmers to be responsible to the ecosystem (for instance, GHGA pays special attention to beekeepers' interests, ensuring no chemicals damage bees and demands such practice from farmers too).

When using hazardous agrochemicals, farmers should apply risk mitigation measures that minimize impacts on the environment and human health. Such measures may include the provision of personal protective equipment (PPE) to substance handlers, warning potentially affected communities and establishing non-crop vegetative barriers.

Integrated Pest Management (IPM) is an approach that considers the elements of a specific agricultural context (common pests, type of product, geographical conditions, etc.) and selects the best combination of pest management methods from all available approaches.

It consists of the following core elements:

- Prevention
- Monitoring and evaluation
- Intervention

Source: GLOBALG.A.P Guideline:

Integrated Pest Management Toolkit

Farmers should make all attempts to use only contact products (herbicides, pesticides and fungicides) and avoid systemic ones, unless using contact products pose more threat to humans and the environment. No fumigation should take place during the flowering period and all fumigation should stop at least 15 days before harvesting.

Farmers should keep records on agrochemicals they use as pesticides and fertilizers, and the methods, time of application and amounts used, and persons involved in the application. This promotes **traceability** of their product (see Principle 4. Enable Traceability), as well as ensures that information attesting to the fact that they comply with international and national standards of sustainability is recorded, in particular as regards food quality and safety, protection of the environment and human health. On a practical level, record-keeping of agrochemicals also helps the optimization of IPM practices through accumulating data on what works and what does not.

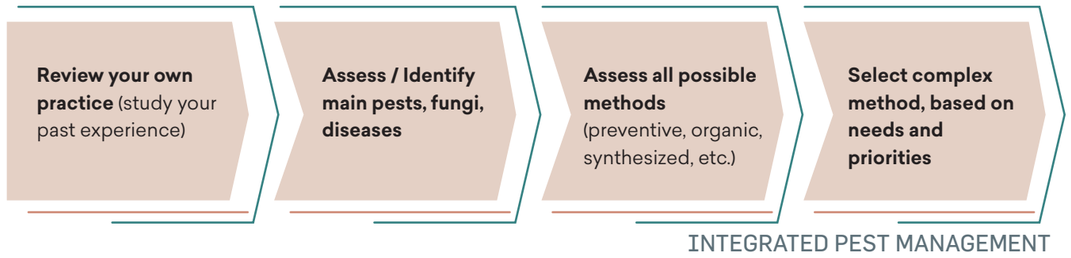
Finally, to ensure a more comprehensive approach, farmers should try to make use of educational or informative resources available from the National Food Agency, such as Integrated Pest Management (IPM) systems which are supported by international donors. The NFA is especially active in supporting farmers combating the stink bug and providing them with both information and material support (http://nfa.gov.ge/).

Farmers should ensure any product they use during farming is **GMO free**. All GMO products should be labelled as such, however, if labelling is not conclusive, farmers can obtain more detailed information from the National Food Agency or GHGA.

POLLINATOR PROTECTION

Pollinators are **insects, birds** and **mammals** that play pivotal role in pollination of flowering plants and, hence, represent a key element of biodiversity and conservation.

- **Bees** are a common pollinator in Georgia, and they are vulnerable to agrochemicals and irresponsible farming practices.
- **Farmers** must take into account wild and domesticated pollinators and conduct their agricultural activities in a manner that minimizes the risks and impacts on them.



INTEGRATED PEST MANAGEMENT

Farmers who are commencing hazelnut farming should ensure they do not plant hazelnut stock that may be genetically modified, even if such a plant can offer higher protection from pests, fungus or other diseases.

To maintain **biodiversity**, farmers can:

- Prioritize endemic species
- Collaborate with each other to ensure cross-vegetation
- Ensure hazelnuts are not planted as a result of deforestation or destroying other natural ecosystems
- Any practices used in agriculture should take into account the surrounding ecosystem and ensure plants or animals within or in the vicinity of a farm are preserved

All **fertilizing** practices should be based on prior assessment (state entities, such as the National Food Agency and GHGA offer support in soil analysis, which is carried out either in a small community or if the farm is large - individually), which will allow farmers to find out which fertilizer is needed and plan accordingly.

SOIL FERTILIZING PROCESS

A fertilizing plan also allows farmers to decrease costs and increase efficacy (for instance, if mixed with mulching, fertilizer is applied more efficiently, as mulching machines plow the land; or drip irrigation systems allow the introduction of fertilizers more efficiently as well).

Farmers should use only mineral or microbial fertilizers and avoid chemical fertilizers, not only because they are more expensive, but because they also deplete soil in the long term. Farmers often add slurry (from rivers) or manure to their practices, which increases fertilizing, while safeguarding the ecosystem as well.

Farmers should try to seek out local mineral mines or slurry carriers, allowing them to use more resources from the local ecosystem. At the same time, farmers should make sure these mines do not harm the environment.

While using mulchers, farmers should exercise care, as some organisms which damage crops may proliferate in the moist soil created after mulching.

State programs and co-funding schemes can support farmers in establishing **sustainable irrigation** (drip systems) and drainage practices; the Rural Development Agency (RDA) and GHGA are core supporters in the process. This will ensure farmers do not use excessive water or do not deplete soil. A sustainable irrigation system takes into account the water needs, timing and rainfall information. It is further important to make sure that untreated sewage water is not used for irrigation. And if treated, only if the water quality complies with the guidelines for safe use of wastewater in agriculture.[4] Farmers should try to select methods and practices with the least water use (dripping irrigation systems); where these are not available, they should avoid excessive use – ensuring less costs and higher quality (too much water can degrade hazelnut quality).

[4] See more from World Health Organization WASH practices: https://www.who.int/water_sanitation_health/publications/gsuweg2/en/

PESTICIDES AND INORGANIC FERTILIZERS ARE NOT USED:

- within 5 meters from any permanent or seasonal water body that is 2 meters wide or less,
- within 10 meters from any permanent or seasonal water body that is over 3 meters wide, or
- within 15 meters from any spring.

! RUN-OFF FROM ORGANIC FERTILIZER SHOULD BE MINIMIZED.

Pruning practices are available in local guidebooks, and state entities. The GHGA offers support in pruning to ensure higher yield and long-term health of hazelnut plant.

Farmers need to seek more information on **organic farming** – both through local legislation (Part II of this Guideline includes such an overview) and practices.[5] There are four main principles of organic farming:[6]

HEALTH	sustain and enhance the health of **soil, plant, animal, human and planet as one** and indivisible
ECOLOGY	work with, emulate and help sustain **living ecological systems and cycles**
FAIRNESS	build on relationships ensuring **fairness** to the common environment and life opportunities
CARE	manage in a **precautionary** and **responsible** manner to protect the **health and well-being** of current and future generations and the environment

[5] A good source on organic hazelnut farming and the methods of pest management is available here "Hazelnut pests and disease s and their management in organic farming," Scientific-Research Center of Agriculture, 2019: http://srca.gov.ge/files/bio_txili.pdf

[6] https://www.ifoam.bio/why-organic/shaping-agriculture/four-principles-organic

2 PRINCIPLE

USE RESOURCES IN AN ENVIRONMENT-FRIENDLY MANNER

Environmental protection is one of the highest societal values, especially in the light of the modern-day climate crisis. Georgia, as a part of the global community, has recognized the importance of safeguarding the environment and combating climate change. Like any agricultural process, hazelnut farming also has a particular impact on both issues and even small farmers need to take steps to decrease adverse impacts on the environment to their best capacity.

SDG IMPACT
7|9|12|13|14|15

SCOPE OF APPLICATION ■ Pre-Harvest ■ Harvesting ■ Post-Harvest

UNDERSTANDING KEY ELEMENTS OF THE PRINCIPLE

ACTION 7.

Encourage and strive for environmentally friendly technologies

1. Use energy efficiently
2. Prioritize renewable energy
3. Use practices with least emissions

ACTION 8.

Ensure sustainable waste management

1. Reuse waste
2. Use hazelnut shells to replace more damaging burning material (incl. coal, and in some instances firewood)
3. Strive to establish mulching practices to reduce waste and increase humus creation – use mulchers
4. Avoid burning waste in open space

ACTION 9.

Manage land sustainably

WHAT DOES IT MEAN?

For larger farms or crackers, energy sources are important – machines used in farming (mulching, fumigation, plowing, gathering, husking) are frequently diesel based, though with very little consumption, farmland management requires powers (lighting, management buildings, etc. – requiring electricity or heating), though also with little consumption) and cracking/drying, storage areas (high electricity or diesel use) require energy.

Farmers/crackers should prioritize renewable energy and ensuring low CO emissions.

Hazelnut farming has mainly organic waste – prunes, weeds, husks and shells. Therefore, there is no need for a complex waste management practice, however an analysis of Georgian practice revealed that there are certain approaches that need addressing. Many farmers do not have established practice of reusing prunes, weed or husks for compost or to give it up for compost to those that produce it. Shell are frequently used as a burning agent or burning material; however, it should only replace more polluting materials (coal, some firewood) and not natural gas.

Larger farmers use mulchers, while small and medium-sized ones rarely do, thus weed or prune reuse in humus is rather rare. Many farmers unfortunately burn their waste in open spaces, though they state this is in small volumes and within the legally set limits.[7] However, small farms are in vicinity and burning is a widespread practice, thus when done by several farmers it does have an extremely negative impact on human health and the environment.

It is also noteworthy that considering the low availability of land in Georgia, it is vital to ensure that farm land is managed in the most sustainable manner. Depending on the exact location, conditions, terrain, shape and other characteristics of the land, farmers should consider the number of nut crops they plant. Following the established practices and provided recommendations from both associations and government agencies, it is possible to ensure the highest available yield on a specific land plot. If these principles and best farmer practices are followed, 1 hectare of typical land (with balanced irrigation and soil health, with standard terrain) can yield on average 3-3.5 tons of shelled raw hazelnuts.

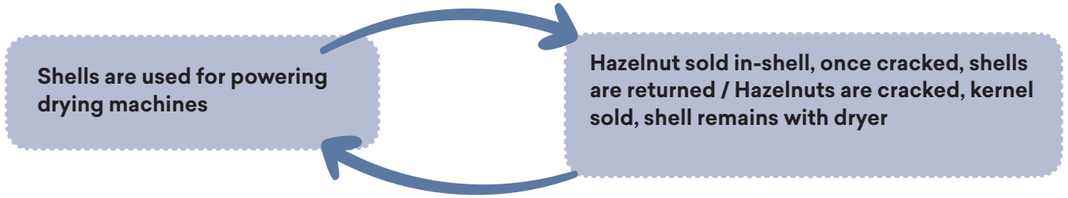
[7] Interviews with small and medium farmers. March-April 2021.

HOW TO IMPLEMENT IN PRACTICE?

Farmers should make use of the resources available to them. If farmers are engaged in multiple agricultural fields within the ecosystem, they should consider utilizing this opportunity, further reducing their cost of purchasing certain products and increasing efficiency.

When farmers require energy sources (such as diesel for machines), they should attempt to seek out clean fuel and at the same time, ensure that these machines operate efficiently (and that they are not left on while not in use).

When electricity is used, farmers/crackers should try to use renewable energy sources. There are special state and international donor programs which support solar or wind power energy installation. A net metering program in Georgia ensures energy through these sources is tabulated, when not in use and is returned to the consumer.[8] This is both environmentally friendly and reduces costs of energy marginally for farmers.



As for drying facilities, they can use renewable sources and benefit from net metering as well (drying is not an all-year-round process and could ensure high benefit, since when not in use, produced energy is tabulated and returned to the consumer), at the same time reusing shells could also ensure efficient waste-management, provided the necessary filters are in place and the air is not polluted (GHGA practice is a good example of this).

Farmers should develop and implement a **waste management plan** which factors in biological as well as chemical waste materials and wastewater that can pose risks to the environment. Farmers should seek ways to reuse waste; if they cannot compost with their own resources, they should collaborate with state or private entities. Using fire to dispose of farm waste is prohibited and can only be permissible in exceptional and emergency cases.

Burning shells should only be used if natural gas or clean energy sources are not available.

Large farmers should establish mulching practices with mulching machines, while small and medium ones should strive to join forces to afford these machines or use support from state agencies and GHGA.

[8] See more at: https://gnerc.org/en/user-page/useful-information-for-customers/netoaghritskhva/59

PRINCIPLE 3

SAFEGUARD CONSUMER RIGHTS

Food safety is the key issue as hazelnut farming has a direct impact on health of the people who consume it. Consumers have the right to obtain all the information, necessary for making an informed choice. Sustainable farming should ensure accurate information and induce farmers to take responsibility for any damages that might occur.

SDG IMPACT
2|3|12

SCOPE OF APPLICATION ☐ Pre-Harvest ☐ Harvesting ☐ Post-Harvest

UNDERSTANDING KEY ELEMENTS OF THE PRINCIPLE

ACTION 10.

Prioritize Food Safety

1. Do not use toxic agrochemicals in a way which can affect the quality and safety of the final product
2. Ensure all toxic contaminants are avoided
3. Abide to food safety and hygiene standards and laws
4. Implement risk assessment mechanisms such as Good Hygiene Practices (GHPs) or Hazard Analysis and Critical Control Point (HACPP)
5. Correct labelling of products
6. Test, discover, act – once toxic contaminates are discovered, they should be labelled, separated, targeted for specific use

ACTION 11.

Ensure Responsible Marketing

WHAT DOES IT MEAN?

Established Georgian agriculture practices are against toxic contaminants and this has rarely been shown to be problematic. However, mycotoxins can appear in processes related to late collection from the ground, delayed husking, drying, storage or transportation. Pesticides, fungicides, herbicides and fertilizers used in farming have not shown to transfer into the final product (and the shell adds to protection as well). However, a growing demand for hazelnut could result in irresponsible practices, threating human health and life. Therefore, it is vital that farmers (and traders) agree to uphold principles of food safety.

Georgian laws on consumer rights are mainly based on international and EU regulatory frameworks (both overviewed in Part II of this Guideline). The laws provide food safety regulations, labelling and redressing measures, which, if followed accordingly, ensures a sustainable approach and fulfilment of this principle.

This principle is equally applicable to traders. Since most Georgian farmers end their engagement in primary production at the stage of collecting, they are rarely engaged in husking, drying and storage and even more rarely in packaging, processing and sales.

HOW TO IMPLEMENT IN PRACTICE?

Farmers should ensure they follow principles of responsible agricultural practices and care for the environment. They should not use toxic products in agriculture unless necessary, and when used, this should be done only after flowering and at least 15 days before harvesting (see principle 1).

Farmers should also ensure no toxic contaminants end up in the harvested product. To guarantee this, farmers and traders should test the harvested product (the NFA, GHGA and any trader will provide farmers with such laboratory testing, which can discover any toxic substances, including mycotoxins (such as aflatoxin), rot, or other damage resulting in health risk).

Farmers should implement mechanisms to identify, assess and address food safety and hygiene risks in their agricultural practices. Such mechanisms include Good Hygienic Practices (GHPs) or other more elaborate systems such as the Hazard Analysis and Critical Control Point (HACPP) system.

Any information, including regarding those issues not produced by agricultural practices (such as allergic reactions), should be included on the label. Food labelling regulations in Georgia provide for detailed information on what needs to be labelled; the regulation is in line with both EU and international practices.

GOOD HYGIENIC PRACTICES IN HAZELNUT INDUSTRY INCLUDE:

- Sanitary disposal of human and animal wastes on the farm
- Sanitary quality of irrigation water
- Animal, plant pest and disease control
- Sanitary Harvesting
- Protection of nuts from contamination
- Removal of obviously unfit materials
- Personal hygiene and sanitations

Source: FAO Code for Hygienic Practices for Tree Nuts

Although packaging is rarely part of the primary production process, it is vital that **all relevant information be transferred from the farmer** to the party which ensures processing, packaging or sale. Record-keeping and enabling traceability (Principle 7) will simplify this process further.

Farmers should also make sure they have established approaches for reacting to **claims** of toxic contaminants or other health risks. If such a discovery is made while the hazelnut is still with the farmer and has not been sold (or stored at a storage facility), the farmer should make sure such hazelnuts are used only for purposes other than consumption; if such a discovery is made after the farmer has sold the product, it is still within his/her responsibility to take necessary actions – such as **provide evidence** that agricultural processes were in conformity with legal standards and sustainability principles. If this is not true, the farmer must take corrective actions to avoid such problems in future.

The business operator involved in the marketing of hazelnut should make sure this process is conducted responsibly, and that no incorrect information be disseminated. Labelling rules must be followed, consumers must be provided with all necessary information to make an informed choice. This ensures that the reputation of Georgian hazelnuts is not damaged.

4 PRINCIPLE

ENABLE TRACEABILITY

Traceability entails determining why legally non-conforming products are produced and taking necessary measures by State Agencies. It aims to ensure high quality and safety in food. Traceability provides the ability to discern, identify and follow the movement of a food or substance, which is either intended or expected to be incorporated into a food.

SDG IMPACT
7|12|17

SCOPE OF APPLICATION ■ Pre-Harvest ■ Harvesting ■ Post-Harvest

UNDERSTANDING KEY ELEMENTS OF THE PRINCIPLE

ACTION 12.

Maintain necessary records

1. Keep records on the origins of agrochemical products, dates of harvest, and other issues
2. Keep a record of environmental or product safety issues
3. Ensure that traceability rules are followed
4. Report when possible and however possible
5. Support traders/farmers in the process

ACTION 13.

Find and participate in available traceability programs

WHAT DOES IT MEAN?

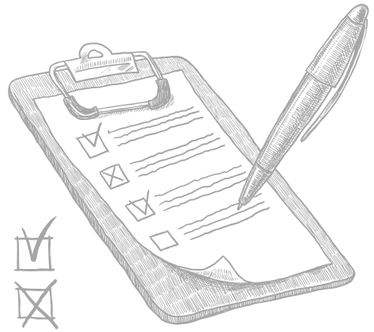
Traceability is the duty of the trader (thus, a farmer who also trades), however, farmers could enable the process further through their own participation. Traceability is currently required by Georgian law (as well as by the laws of most countries to where Georgian hazelnuts are exported), and therefore following these rules is in the interest of all business operators.

HOW TO IMPLEMENT IN PRACTICE?

Farmers can support traceability through keeping their own record of agricultural practices (pest and disease control, herbicide usage, fertilizing and other dates, products, or other details thereof; pruning periods; harvest dates and pre-drying steps – cleaning, storing, transporting to drying station, etc.). They can also report any issues when passing products to traders (or buyers), or at any stage. Farmers can also turn to the National Food Agency or GHGA and seek advice on traceability and how to enable it, if needed.

This principle has particular application to traders, who need to ensure traceability of products they receive from farmers; they should also facilitate and support farmers, to simplify record keeping and information gathering.

The GHGA and certain traders often offer special traceability programs (such as Farmer's Diary, providing record-keeping support) – understanding and taking part in them will facilitate the process.



5 PRINCIPLE

DO BUSINESS WITH INTEGRITY

Integrity in business means that farmers/traders act with honor, follow laws and standards, strive towards better practices (including voluntary) and work with other actors – not against them.

SDG IMPACT
9|12|16|17

SCOPE OF APPLICATION ☑ Pre-Harvest ☑ Harvesting ☐ Post-Harvest

UNDERSTANDING KEY ELEMENTS OF THE PRINCIPLE

ACTION 14.

Take action to increase the reputation of Georgian hazelnuts locally and globally

1. Do not declare wrongful information

ACTION 15.

Say no to all forms of corruption

ACTION 16.

Compete with integrity

1. Abide to the laws and rules
2. Respect and share knowledge with competitors
3. Do not take advantage of or abuse market position

ACTION 17.

Pay your taxes

1. Respect the tax legislation, declare truthfully
2. Do not abuse privileges
3. Prepare for post-2023

ACTION 18.

Strive towards better standards and advocate with fellows

1. Be aware – Global GAP, Rainforest Alliance (former UTZ), etc
2. Prepare and participate
3. Advocate for your standard

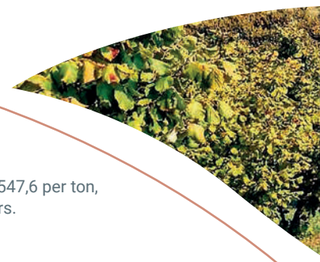
WHAT DOES IT MEAN?

Georgian hazelnuts have been damaged not just by natural causes, but also by malicious practices, i.e., when traders make wrongful declarations to buyers. Therefore, buyers (importing countries, large companies, etc.) do not trust traders from Georgia or trust only a handful of them. As a result, Georgian hazelnut prices are substantially lower than other, similar quality hazelnuts.[9] Therefore increasing the reputation of Georgian hazelnuts is extremely relevant for it to reach its well-deserved price.

Georgia's current corruption ranking worldwide is promising and nothing indicates that there is any risk of corruption in hazelnut farming, however all business operators (farmers and traders alike) should ensure they recognize the principle of integrity and say "No" to all types of corruption, reaffirming the practice.

Competition is regulated in Georgia, and there are generally established rules for acting on the market.[10] Georgian hazelnut farming practice demonstrates that farmers have limited competition among them, mainly due to high demand and little need to compete. However, it is still important for the farmers/traders to openly declare that they will not abuse their place on the market.

Primary production (including of hazelnuts) enjoys multiple tax benefits in Georgia (See Part II of the Guideline). However, these benefits will end in 2023 and it is important that farmers prepare for that time, gain relevant knowledge and establish practices supporting the transition. At the same time, benefits apply to primary production and export, meaning traders or other business operators should make sure they declare and pay taxes as required. This is vital for integrity. At the same time, it ensures avoiding the risk of being checked and sanctioned by the Revenue Service, which could drastically damage the reputation and financial state of the business operator.



[9] Source FAOSTAT: for example, prices for Hazelnuts, with shell in 2019 for Georgia was USD1547,6 per ton, for Italy - USD3599,6, and for Turkey - USD2821.1. Such difference has persisted over the years. See more in Guideline Part I.

[10] See Georgian Law on Competition: www.matsne.gov.ge/en/document/view/1659450

HOW TO IMPLEMENT IN PRACTICE?

In order to increase and safeguard the reputation of Georgian hazelnuts, all farmers and traders should make sure no information is wrongfully declared at any stage of production. At the same time, correct farming, drying and storage practices as well as transportation procedures will ensure quality is maintained throughout the supply chain.

All business operators should make sure they understand the elements and possible methods of corruption and know how to act on them (bribery, influence paddling, etc.). This does not concern only government corruption, but also corruption in the private sector, which can manifest as improper labelling, favoritism, insider trading, etc. These issues should be addressed accordingly. Larger operators should make sure they have mechanisms in place for whistleblower protection, in order to ensure the timely discovery of such facts.

All business operators should understand competition rules and make sure they do not abuse their place on the market. Furthermore, larger sized farms, unlike small and many medium-sized farms, have many employees (seasonal mostly) and therefore an additional responsibility while providing jobs. Experience shows they often act responsibly and promote above average wages and good working conditions. It is important for such tendencies to be more widespread to support fairer practices and inrease reputation, as well as result in more economic benefits locally (See also Principle 8. Empower Your Community).

Georgian practice also shows there is active knowledge-sharing among farmers, which further strengthes collaboration with competitors instead of damaging each other; this will support rapid growth of the market.

Tax benefits apply to farmers who have up to a certain level of income; thus, farmers should make sure they are aware of their turnover and declare their income on time when they are no longer elligible for such benefits. Ignoring this might result in tax checks and tough sanctions, which could negatively affect the future prospect of business. Farmers can obtain more guidance on other benefits (such as lower income tax for small enterprises) from the Revenue Service and through knowledge sharing practices.

Last but not least, acting with integrity also entails striving and advocating for better farming standards. The most widely recognized and relevant standards are elaborated in Part II of this Guideline, which have formed the basis for these principles as well. Farmers, particularly large and successful ones, should strive towards them, prepare for their establishment to increase their reputation and demand for their products and promote them in the field. The GHGA or other platforms are a good starting point for advocating for more sustainability in the field, increasing the reputation and demand for Georgian hazelnuts globally and securing the niche of "sustainable hazelnuts."

To ensure sustainability of production, farmers should take into consideration adhering to internationally recognized sustainability standards. Such standards often come with a certification program that allows for a comprehensive sustainability assessment of a farm, assists farmers in correcting non-compliance points and grants a well-recognized standard certificate if/when farmers bring their practices into alignment. The certificate attests that a farmer produces a sustainable product and thus obtains trust from consumers and retailers. This normally leads to less recalls/rejections of the product, and therefore to more market opportunities. Examples of such certificates include the Rainforest Alliance and GLOBALG.A.P Integrated Farm Assurance (IFA) standard. More information on certifications and standards is available in Part II of this Guideline.

6 PRINCIPLE

PROVIDE DECENT WORKING CONDITIONS

Labor issues are the core of the social aspect of sustainability in the private sector. Agriculture is globally recognized as one of the vulnerable industries to abusive labor practices such as modern slavery, child labor, discrimination and dangerous work conditions. Georgia is party to a number of international frameworks that protect labor rights and has an adequate national framework for protecting labor rights. However, labor abuses are still frequent in the country and the hazelnut sector is not free of issues in this regard.

SDG IMPACT
1|5|8|9|10

SCOPE OF APPLICATION

- ☐ Pre-Harvest
- ☐ Harvesting
- ☐ Post-Harvest

UNDERSTANDING KEY ELEMENTS OF THE PRINCIPLE

ACTION 19.

Safeguard the health, wellbeing and safety of employees

1. Safeguard the health of workers
2. Care for employee well-being, including through established work hours, break and rest times, leave, etc.
3. Provide decent wages, making sure least living wages are paid
4. Prioritize safety
5. Provide health and safety equipment and instructions to workers
6. Use technologies to ensure the above (machines that speed up processes, reducing time spent in hard conditions, etc.)

ACTION 20. **Eliminate all forms of forced and compulsory labor**

ACTION 21.

Abolish child labor

ACTION 22.

Eliminate all forms of discrimination and workplace harassment and violence in employment

ACTION 23.

Respect the right of association and collective bargaining

WHAT DOES IT MEAN?

Labor standards are an essential part of sustainable agriculture. The sector poses various risks to workers' rights and well-being starting from the use of child labor to discriminatory practices.

While in Georgia severe labor violations in hazelnut farming have yet to be seen, the fast-growing industry can still present risks of adverse impacts. The sector consists of producers of all sizes: from large businesses with a considerable number of employees to small farms that are operated by family units. The nature of hazelnut farming requires different types of workers. This includes specialists who work with agrochemicals or agricultural machinery, workers who work on pruning, security guards and other administrative and technical personnel.

Hazelnut harvesting requires temporary seasonal workers and a fast-paced work routine to get the best out of rapidly changing weather (especially in western Georgia). As interviews revealed, workers during harvest are largely local women often accompanied by their children. They are sometimes paid according to the work done (e.g., by the weight of hazelnuts they have harvested individually) and important events in workers' lives may depend on these payments, such as purchasing school supplies for their children or preparing for the winter.

Other aspects of the value chain of hazelnut farming pose different risks. For instance, workers in drying facilities are subject to high noise pollution.

HOW TO IMPLEMENT IN PRACTICE?

To avoid mentioned social risks, farmers should strictly follow the rules determined by the law. These include taking sufficient safety measures to ensure that workers are not injured, poisoned or otherwise harmed during any of the operations, especially during harvest and using agrochemicals. For this purpose, producers should explain safety rules to their workers if necessary and supply them with the necessary PPE such as protective glasses, gloves, noise-cancelling headphones or a hazard suit for specialists working with agrochemicals. Such equipment should be paid for by the producer and should not affect workers' wages (especially on seasonal, menial workers). This requirement includes family farms and applies to child safety and health as well. During the COVID-19 pandemic, this also includes the provision of supplies that protect workers from infection.

Farmers should ensure workers have decent and dignified working conditions.[11] This includes the provision of necessary sanitary, hygiene and subsistence facilities and materials such as

[11] There is no universally recognized definition of living wages, however most accepted one, reflecting the internationally recognized standards and approaches is provided by Anker Methodology, available here: https://www.globallivingwage.org/about/anker-methodology/.

Remuneration received for a standard work week by a worker in a particular place sufficient to afford a decent standard of living for the worker and her or his family.

Elements of a decent standard of living include food, water, housing, education, health care, transport, clothing, and other essential needs, including provision for unexpected events

restrooms, designated places to consume food, tools and equipment to simplify and dignify the work process. Farmers should also allow sufficient breaks during work, especially for women who have children to take care of. The duration of work should only exceed 8 hours in cases provided by the law. In the case of overtime, farmers should ensure an increase of pay and take into consideration the other obligations of workers such as childcare. Children accompanying workers should have a designated safe space that provides for educational and entertainment activities for children to the possible extent. These requirements apply to all farmers, but take their strongest form with regard to producers, crackers and other actors of large size.

Forced labor and labor by children below the age of 16 must be absolutely prohibited on the farm. Farmers must ensure such practices do not take place on the farm even without their knowledge. Workers are not required to lodge deposits or identity papers, nor are salaries, benefits or properties retained to force workers to remain on the work site. Workers are free to leave employment after giving reasonable notice. This applies regardless of the farm size and relation between the employer and an employee in question. Workers from 16 to 18 years of age should not be involved in dangerous, extremely heavy, or night-time activities and should be accorded time and resources to advance their education first. Children living on small scale family farms may participate in farming activities that consist of light, age-appropriate duties that allow them to develop skills, provided that the activities are not harmful to their health and development, do not interfere with schooling and leisure time and are under the supervision of an adult.

Farmers should ensure that workers are treated equally and without discrimination of any kind. This includes the provision of equal pay for equal work, equal opportunities to workers and equal conditions. The requirement of non-discrimination also includes the prohibition of any type of harassment and violence at the farm and during work. Farmers should pay extra attention to cases of sexual harassment and violence to ensure a safe workspace for their workers. Farmers should also take into account the needs of vulnerable groups and strive to provide opportunities to them and accommodate their needs. This includes women, persons with disabilities, socially vulnerable persons, individuals from different religious or ethnic backgrounds, etc. Last, but not least, farmers and supply chain actors should make extra an effort to promote and mainstream gender equality in their work.

Farmers should make sure that first aid service and emergency health care are both free of charge for the treatment of work-related injuries. First aid boxes should be placed at central locations. A clear accident and emergency procedure should be in place and workers should be trained accordingly. Workers who handle pesticides must use personal protective equipment (PPE) and protective clothing that is prescribed for the pesticide used and its method of application. Workers who handle pesticides have access to changing and washing facilities. Workers have access to safe drinking water, toilets and washing places.

Workers are trained in the use of personal protective equipment for harvesting activities. Workers are provided with gloves if they are handpicking, and with masks and glasses when they are operating de-husking or harvesting machines. Personal protective equipment is provided at no cost.

Freedom of association and collective bargaining should be secured for the workers of large farms, and no person should be persecuted and discriminated against for their affiliation to a trade union or a similar organization. Workers' organizations should be provided sufficient resources and space for proper functioning.

A record should be kept of wage payments and a copy be provided to each worker. The producer should only employ foreign migrant workers if they are registered and in the possession of a valid work permit.

Workers living on-site have clean and safe living quarters. Special attention should be given to hygienic sanitation, safe drinking water, clean cooking and eating areas, ventilation, protection against weather conditions and safe storage of personal items.

7 PRINCIPLE

ASSESS, PREVENT AND ADDRESS HUMAN RIGHTS VIOLATIONS

Hazelnut farming has an impact on other human rights as well, such as the rights of neighbors, local communities, landowners, etc. Sustainable practices mean any business operator must assess their impacts and address them.

SDG IMPACT
1|10|11|16|17

SCOPE OF APPLICATION

Pre-Harvest | Harvesting | Post-Harvest

UNDERSTANDING KEY ELEMENTS OF THE PRINCIPLE

ACTION 24.

Assess any impact on other human rights and take action

1. Assess the impact on the right to health, life, environment, community rights, rights of owners (when lands used are in the lease), etc
2. Establish instruments for acting on impacts

ACTION 25.

Redress all impacts

1. Establish grievance mechanisms
2. Remedy impacts

WHAT DOES IT MEAN?

Hazelnut farming can impact various human rights, for example:

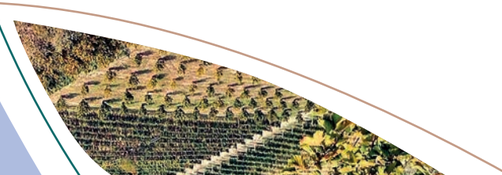
- Right to health and life
- Right to a healthy environment
- Community rights – such as rights to exercise traditional practices, religious rights, access to common goods (lands, water, etc.), etc.
- Rights of owners when hazelnut farming is conducted on leased properties

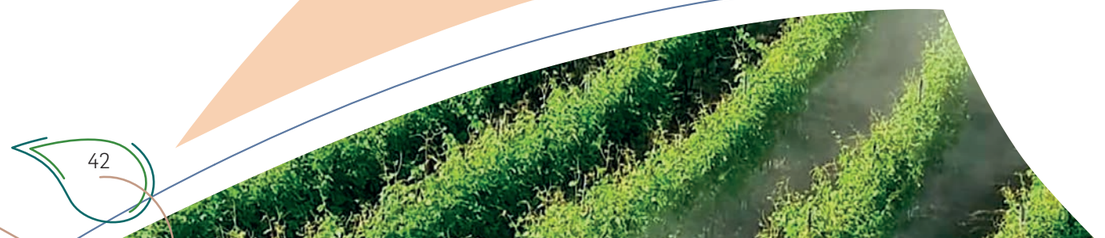
Smaller farmers might have a limited impact on such rights. However, the bigger the farm, the bigger the impact. Some of these rights have been covered by these principles, although various practices, surrounding cultures, local community traditions or other issues can cause varying impacts, which cannot be exhaustively listed.

For instance:

- a large farm may use local spring water for irrigation, draining all the water and leaving none for the community
- a drying facility in the vicinity of the dense population may have an impact on neighbors through noise or emissions
- a farm may be leasing a property with an agreement to pay a portion of the income from the harvest to the owner, thus, correct record-keeping is important to provide the owner with fair and correct remuneration
- a farmland using abrasive practices may degrade soil quality in neighboring areas, resulting in erosion, landslides, or crop degradation, etc.
- a small farm may be using pesticides without prior warning and during active bee hours, may inadvertently kill a neighbor's bee families

Such impacts may not be obvious at a first glance, which is why prior assessment is necessary. After the assessment results in uncovering specific impacts are in hand, farmers need to make sure they know when and how to address these impacts. Establishing certain grievance mechanisms based on their size and resources will help ensure sustainable practices.





HOW TO IMPLEMENT IN PRACTICE?

All farmers, as well as traders, should make a prior assessment (preferably periodically, taking note of any change in circumstances). Larger farmers should be aware of their impacts. They may need to **engage stakeholders** in the process, such as local communities, beekeepers, environmental specialists and local governments, etc.

Such participatory assessments will ensure that the farmer is aware of possible issues before they occur and can avoid them. Such prevention is particularly important financially, as if they are not dealt with, once they occur, restituting damages will be costly both financially and reputationally.

Prior assessment and making sure a farmer/trader acts on it cannot fully eliminate the risk of such problems occurring. A farmer/trader should ensure there is a grievance mechanism in place. This means there is a way to communicate the problem from the affected party (*e.g.*, community member knows how to approach farmer/trader through direct communication, hotline or other medium, depending on a size and organization of the farmer/trader) and that the farmer/trader can respond to it.

If every possible action has been taken to avoid the occurrence of adverse impact (for instance, filters were in place at a drying station, but the air was still polluted; or the farmer made sure they used drip irrigation, but water from the local source was still depleted), additional measures should be considered and issue should be resolved through appropriate measures (if an assessment demonstrates that more filters are necessary, they should be put in place; if the local spring is not sufficient to supply both the village and the farm, alternate resources should be sought out).

Collaborative measures ensure high trust between the farmer/trader and affected party, guaranteeing an amicable solution which is both financially less burdensome and reputationally valuable.

Additionally, these approaches (assessing, acting, ensuring redress mechanisms) should also be applied for Principles 3 and 6.

EMPOWER YOUR COMMUNITY

PRINCIPLE 8

Farming has a strong impact on local communities; however, these impacts are not always adverse, and they can have an empowering effect, supporting economic and social development.

SDG IMPACT
1|4|5|8|10|11|17

SCOPE OF APPLICATION

- Pre-Harvest
- Harvesting
- Post-Harvest

UNDERSTANDING KEY ELEMENTS OF THE PRINCIPLE

ACTION 26.

Empower through employment and respect local culture

1. Pay special attention to vulnerable groups
2. Prioritize local employment
3. Take note of issues important to your employees – pre-school period needs, holiday seasons, local cultural issues, etc.
4. Understand and respect local context, including religious, ethnic, traditional and other characteristics

ACTION 27.

Contribute to efforts aimed at poverty reduction in the community

ACTION 28.

Take part in knowledge-sharing

1. Support other producers, particularly smaller and newer ones

WHAT DOES IT MEAN?

Communities are engaged in local farming practices, even when they do not own their own farms – for example if they are employed there, particularly for seasonal jobs (fumigation, harvesting and gathering). In Georgia, these people mostly come from local communities and the largest number of seasonal workers are hired in August-September (right before the schoolyear). Thus, increasing the social impact of farming.

Some farmers even noted that although children are not engaged in farming, they accompany their parents (harvesting and gathering is mainly done by women), and thus considering their safety and wellbeing becomes relevant as well.

Hazelnut farming is common in almost all of Georgia, and the country is rather diverse in ethnicity, religion, language, traditional practices, etc. Understanding the local context–particularly when business operators do not originate from the community–is important to make sure the community does not feel neglected, offended or oppressed.

Moreover, employment opportunities and revenue created from hazelnut farming plays a significant role in the development of local communities. Large industrial farms as well as small family farms contribute to local economic development and create wealth for local value chain actors and social networks around them. A sustainable and responsible hazelnut sector can also enhance the skills and competence of the local workforce. Through these and other positive impacts the hazelnut sector can contribute to the reduction of poverty on local, regional and even national levels.

Hazelnut farming is mostly a local practice, GHGA workgroups (consisting of around 10 farmers) also include mostly neighboring farms. At the same time the hazelnut community benefits from cross-regional information sharing as well: for instance, certain regions have more developed agricultural practices than others. Such experience-sharing supports strong development of the field.

HOW TO IMPLEMENT IN PRACTICE?

Farmers/traders that use hired labaor should prioritize locals and take note of vulnerable groups (women, socially vulnerable families, minority or excluded groups, etc.). At the same time, when hiring for harvest and gathering, farmers should make all attempts to support their employees' immediate needs – make timely payments, support working mothers with flexible arrangements, etc.

Additionally, farmers should be aware of the effect of their activities on local development and, considering the business needs, prioritize spending funds in local value chains, for instance, when purchasing farm supplies, hiring waste disposal services or renting equipment.

When employees bring children along, farmers should make sure they are safe from any hazard and their parents have necessary information to ensure this as well.

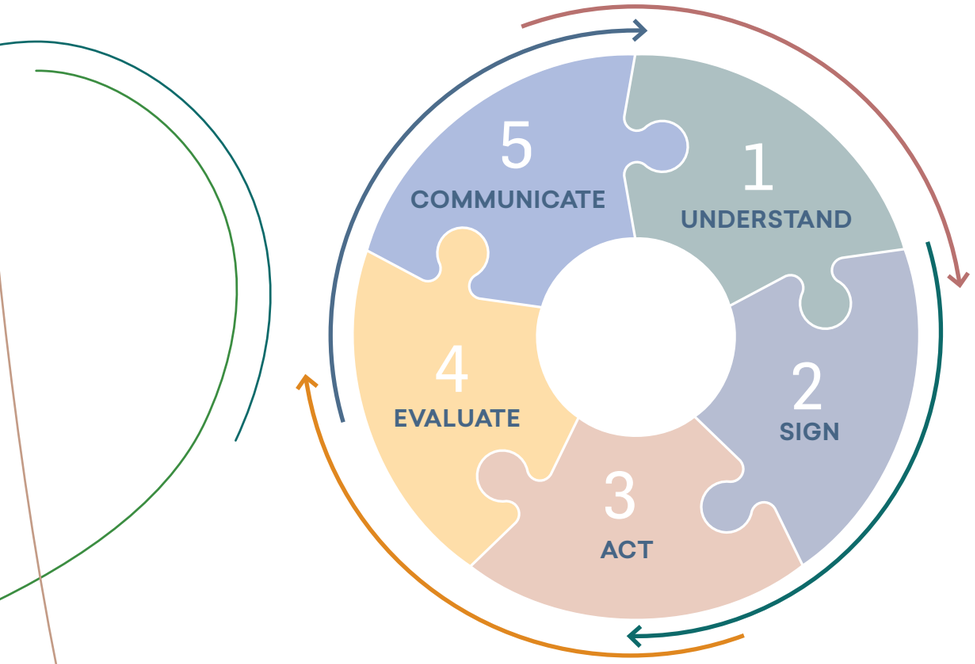
Business operators should familiarize themselves with the local context, understand the cultural characteristics and respect them. For instance, certain religious holidays may be a bad time for farm activities. Such issues can frequently be uncovered through discussions with staff or partners.

Farmers should actively engage in knowledge-sharing, especially those that are more experienced and successful. Sharing special equipment will also support trust-building, collaboration, and development.

ESTABLISHING AND ENSURING SUSTAINABLE HAZELNUT FARMING PRINCIPLES

The above principles of sustainable hazelnut farming are a product of a careful assessment of local and international practice. They aim to support sustainability approaches but are not overly ambitious and apply to all businesses engaged in hazelnut farming regardless of their size, operations and past practices.

Adopting these principles is a cycle, which guides farmers and traders to ensure that Georgian hazelnuts are a sustainable product, which grows in parallel to market development and growth.



1.UNDERSTAND

Farmers, crackers and traders should familiarize themselves with the principles and understand what is required of them and to what extent. At the same time, they should see their own benefits as well – improved reputation, increased demand, increased trust and readiness for existing or planned legislation. It is recommended the interested parties seek advice from the GHGA for more support and detailed guidance.

2. SIGN

These principles do not require any specific recognition procedure, there is no formal letter of commitment expected from the operators. Anyone engaged in hazelnut farming can sign them and declare their readiness to uphold these principles. Once farmers/crackers/traders make such a declaration, they establish their dedication and become an example to others within the community.

3. ACT

All principles are accompanied with relevant actions and specific advice, supporting farmers to act accordingly and establish principles in practice. Supporting each other and sharing knowledge is vital in this process, with the GHGA having a particularly important role.

4. EVALUATE

These principles do not include specially dedicated evaluation methods, however, the below is a checklist supporting farmers, crackers and traders, which can help assess how they are progressing, what works well and what does not. This will give them opportunity to seek further guidance and improve.

- ☐ It is easier to assess if you have set specific goals, timeline and indicators. All Principles are your goals, however, not all actions are applicable to you and you might prefer to select the ones most challenging for you. Some actions may need a short period of time to be implemented, while others will be more long-term (purchasing machines or infrastrucutre development does not have to happen immediately).
- ☐ Indicators should respond to your capacities - how far you can go and what you can measure. Do not set indicators that are not measurable *("reach better quality" - is not measurable, "kernel weight is 45%" or "yield is 3 tons per ha" are easily measurable; same goes for other principles - "uphold labor standards" is not measurable, "have 0 child workers", "women and men get equal pay for equal work", "workday is 8 hours" can be measured easily).*
- ☐ Set reasonable expectations and tailor them to your needs - *if you do not use electricity, there is no need to set a goal of installing solar panels. If you have 100 employees, you might want to focus on labor principles.*
- ☐ Make sure you know how to assess and use indicators - use support from partners (GHGA, Global Compact, CSOs, etc.).
- ☐ Assess for your own good - do not assess for reporting purposes. Do it because you can use the information for improvement, better planning, or other matters, important to you. If you have the possibility to select an employee who makes sure your operations are assessed periodically, that's ideal, but smaller farms might need to simply set their goals for future improvement.

5. COMMUNICATE

While accountability on your progress is usually expected from participants of standards and principles, these principles do not obligate formal reporting. Instead, farmers, crackers or traders should maintain information on how the process is proceeding and inform their stakeholders – such communication is particularly vital to attract investors, donors, partners and buyers. At the same time, many employees pay attention to such developments within their potential employer, which means bringing in qualified employees could also be facilitated by such communication. Larger companies should take on the responsibility to have a more rigorous reporting and communicating process, through publishing brief information on what has been done and informing communities as well.

- ☐ Make sure you know who you are communicating with - is it your partners, employees, donors, community, public or other actor?
- ☐ Understand reasons for communications - do you want to bring in more funds, increase your reputation, seek better parnters, improve your practices, redress previous errors, or is there another reason?
- ☐ Seek out support in the process - the GHGA and UN Global Compact Network Georgia may provide you with support from their practices. Share knowledge with other farmers.
- ☐ Select methods of communication based on who you are reporting to and why- a written report may work for donors or partners, but employees and community will prefer live conversation.
- ☐ Do not burden yourself - communication does not mean you need to employ a PR team. A larger enterprise may require such support, but small and medium sized farms need to report within their resources. Record-keeping or simple practice description may be sufficient to inform your stakeholders on how you have succeeded and where you need more support.

PART II

REGULATORY FRAMEWORK, AND PRACTICE ASSESSMENT

EXECUTIVE SUMMARY

Hazelnuts are one of the most demanded Georgian products worldwide and it has a long history locally as well. However, the reputation of Georgian hazelnuts has been damaged in recent years due to several reasons. Considering the economic, environmental and social impacts of hazelnut exports locally and nationally, the need to establish uniform sustainable approaches that will help increase both quality and reputation of Georgian hazelnut has emerged.

The first part of th Guideline provides Georgian hazelnut sector with Sustainable Hazelnut Farming Principles considering the needs, resources, and readiness of the sector. While the second part is focused on research into the existing Georgian practices and regulatory framework both locally and internationally, looking into mandatory and voluntary standards; The main audience of each part is also different – while the first part targeted at sector participants – farmers, crackers, and traders, the second part addresses the government agencies, authorities, associations, civil society, and donors.

This document takes a contextual approach and briefly considers general sustainability requirements, while taking a more detailed look at sector-specific standards. The analysis of the international regulatory standards is narrowed to the EU regulatory framework, which represents the largest buyer for Georgian hazelnut. The analysis of sustainability requirements for a specific sector requires a multidimensional review of regulatory frameworks and voluntary standards, looking into development issues, as well as contextual standards related to the use of agrochemicals, food quality and safety, labor rights, deforestation, biodiversity, integrity, etc. This study attempted to cover all the relevant fields, particularly those which seemed to have been most topical and less clear for sector participants.

The regulatory framework, international standards and practice analysis have demonstrated that there is substantial progress in Georgian hazelnut farming practices. At the same time, the national regulatory framework is largely in conformity with major EU regulations and authoritative standards, frequently directly referring to them. However, it is obvious, that many farmers are unaware of the sustainability agenda and cannot clearly see their role in it. The economic and social impact of hazelnut farming is great on local, regional, and national levels, which gives rise to a need to target efforts at increasing the understanding of this impact and channeling it into positive joint steps towards sustainable development.

Part II of the Guideline is comprised of five main chapters: the first provides introductory information on the correlation of sustainability and agriculture; the second chapter discusses Georgian practices in hazelnut farming based on desk review and interviews with sector stakeholders; the third chapter looks into the international regulatory framework, particularly focusing on UN and EU regulations, while the fourth chapter reviews Georgian regulations and existing state schemes in more detail, benchmarking it with regards to the EU framework; while the fifth and final chapter overviews the most authoritative international farming standards, including hazelnut-specific and more general agricultural standards.

The information provided in this section of the Guideline was cited while drafting the first part – the Sustainable Hazelnut Farming Principles, helping relevant operators better understand their impact on global or national sustainable Development Agenda. All principles serve common goals: better farming, better quality, better market access, and better social value.

The guidelines were created through engagement from international experts specialized in farming generally and the hazelnut sector specifically, the Georgian Hazelnut Growers Association and government authorities, ensuring higher value and practicality for the field and supporting the development of sustainable practices in Georgian hazelnut farming.

1

SUSTAINABILITY IN AGRICULTURE

SUSTAINABLE DEVELOPMENT AND AGRICULTURE

Food has a vital role in alleviating global poverty and achieving inclusive development as a basis of human life, health, development and dignified life. While the global population has been steadily increasing, food systems in different countries have been attempting to keep up and meet the increasing need. This race has resulted in substantial developments and drastic changes to conventional approaches in food production, including agricultural farming. As modern food production has become faster, cheaper and more efficient through industrialization and new technologies, it has also had significant negative impacts on the social and natural environment globally. These adverse impacts include, among others, climate change, pollution and degradation of soil and water, the loss of biosphere, socio-economic inequality and abuse of human rights, and harm to human health.

To address and mitigate the negative impacts of agricultural food production, the concept of sustainable agriculture has been developed. There is no singular definition of this concept and a myriad of approaches have developed under it.[1] However, the idea of sustainable agriculture can be defined by the core principle that agricultural production should **meet the needs of the present without compromising the ability of future generations to meet their own needs**.[2] Sustainable agriculture has three basic goals: environmental health, economic profitability and socio-economic equity.[3] In practice, these goals materialize in detailed policies concerning production techniques, and state-of-the-art tools that ensure the minimization of environmental and social impacts and increase economic benefits. Examples of a sustainable approach to agriculture include organic farming, precision farming, climate-smart agriculture, integrated pest control systems, sustainable intensification, amongst other approaches.[4]

Regardless of the approach, sustainable agriculture needs to be aligned with the 2030 Sustainable Development Agenda and its Goals (SDGs). The Agenda 2030 aims to address modern-day challenges through environmental, social and economic dimensions of sustainable development specified in the 17 SDGs and their targets. Agricultural farming has linkages to most of the SDGs. For instance, SDG 8 promotes full and productive employment and decent work for all which is extremely relevant for workers in the agricultural sector. SDG 12 ensures sustainable

[1] For instance, see: Oberč, B.P. & Arroyo Schnell, A. (2020). Approaches to sustainable agriculture. Exploring the pathways towards the future of farming. Brussels, Belgium: IUCN EURO.

[2] Lichtfouse E., Navarrete M., Debaeke P., Souchère V., Alberola C., Ménassieu J. (2009) Agronomy for Sustainable Agriculture: A Review. In: Lichtfouse E., Navarrete M., Debaeke P., Véronique S., Alberola C. (eds) Sustainable Agriculture. Springer, Dordrecht, p.2 available here: https://doi.org/10.1007/978-90-481-2666-8_1

[3] Based on the National Sustainable Agriculture Coalition (NSAC), https://sustainableagriculture.net/about-us/what-is-sustainable-ag/

[4] In Oberč, B.P. & Arroyo Schnell, A. (2020). Approaches to sustainable agriculture. Exploring the pathways towards the future of farming. Brussels, Belgium: IUCN EURO.

consumption and production patterns and includes the protection of soil, water and air through environmentally sound management of chemicals which is extremely relevant for agrochemicals used in farming. SDG 15, among other targets, aims to halt and reverse land degradation and halt biodiversity loss which industrialized agricultural practices have enormous adverse impact on. However, the Agenda 2030 explicitly underlines the importance of sustainable agriculture in SDG 2, which targets hunger, food insecurity and promotes sustainable agriculture. Its targets recognize the global need for increased agricultural production through sustainable, resilient practices which help maintain ecosystems and strengthen capacity for adaptation.[5]

Sustainable development recognizes economic development, environmental protection and social development as mutually reinforcing objectives and, hence, it brings together international frameworks for each of these pillars. The 2030 Agenda lists international acts, conferences and summits that have served as the foundation for and informed the sustainable development agenda. These acts include the Universal Declaration of Human Rights, the Declaration on the Right to Development, the Rio Declaration on Environment and Development, the United Nations Conference on Sustainable Development, the World Summit for Social Development and others. The Agenda further lays down the list of international instruments that can aid in the pursuit of meeting the SDGs. Such instruments include the Guiding Principles on Business and Human Rights and the labour standards of the ILO, the Convention on the Rights of the Child, and key multilateral environmental agreements,[6] such as the United Nations Framework Convention on Climate Change (UNFCCC).[7] Therefore, sustainable development in general, and, particularly, in agriculture, should be interpreted as interdependent and mutually reinforcing with international frameworks and acts concerning human rights, environmental protection and development.

Consequently, the analysis of sustainability requirements for a specific sector requires a multidimensional review of regulatory frameworks and voluntary standards that govern the core elements of sustainability and sector-specific activities. On top of general frameworks of environmental protection, human rights and development, sustainability in the agriculture sector encompasses the contextual standards related to the use of agrochemicals, food quality and safety, labour rights, deforestation, biodiversity and integrity. The analysis should further be contextualized in accordance with geographic, regional, or other features that are most relevant for the sector in question.

This report takes a contextual approach and briefly considers general sustainability requirements, while taking a more detailed look at sector-specific standards. Moreover, the analysis of the international regulatory standards is narrowed to the EU regulatory framework which represents the largest buyer for Georgian hazelnut.

[5] More information on Sustainable Development Goals, its targets and relevant data is available here: https://sdgs.un.org/goals

[6] Transforming our world: the 2030 Agenda for Sustainable Development, Resolution adopted by the General Assembly on 25 September 2015, A/70/L.1, para. 67, available here: https://sdgs.un.org/2030agenda

[7] ibid. SDG 13(a). More information available here: https://www.un.org/sustainabledevelopment/climate-change/

WHAT STANDARDS APPLY TO BUSINESSES IN NATIONAL CONTEXTS?

While states' roles in promoting sustainable agriculture is paramount, the main actors of the sector, as well as target audience for this Guideline, are private actors – farmers, crackers and traders. In this light, it is important to consider what responsibilities businesses have in certain aspects of sustainability. Moreover, this also explains the scope of this study and why certain international standards are included and others are not.

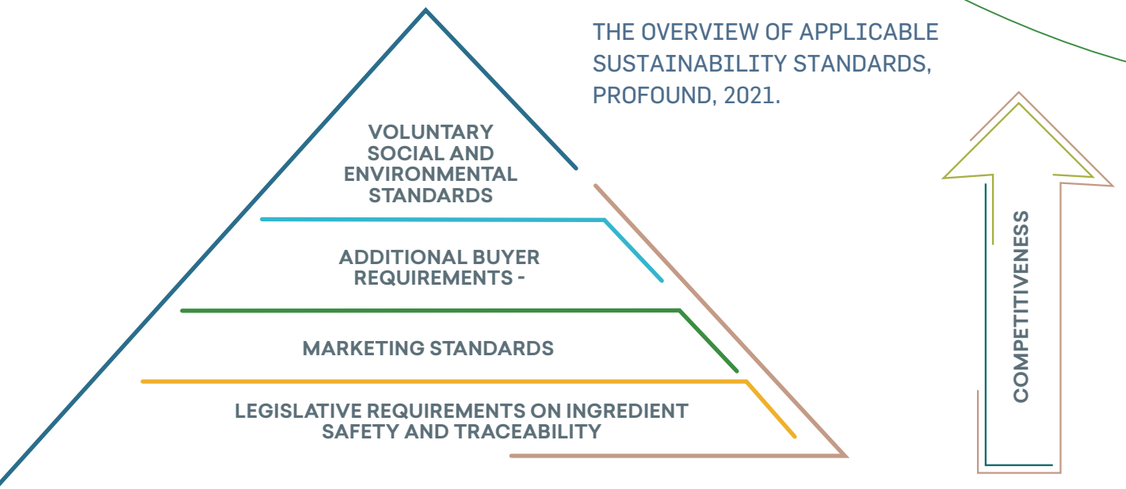
Businesses do not have international obligations in the same way as states do. Therefore, Georgia's international obligations in the spheres of sustainability, environment and human rights are translated into obligations for the producers and processors of hazelnuts as far as they are reflected in the national legislation and it is enforced.[8] However, this general rule has been questioned globally and there are promising initiatives and frameworks that provide international business responsibilities.

The UN Guiding Principles for Business and Human Rights (UNGPs) lay down principles for businesses' responsibility to respect human rights in their operations and activities and establish instruments to ensure this, such as human rights due diligence (HRDD) and human rights impact assessment (HRIA).[9] The same approach has been adopted by the OECD Guidelines for multinational enterprises which lays out businesses' responsibilities to respect internationally recognized human rights and contribute to economic, environmental and social progress with a view to achieving sustainable development.[10] Regardless of their significant global influence, both the UNGPs and OECD Guidelines are of a voluntary nature. However, the standard of business responsibility to respect human rights has also been applied through national mandatory HRDD legislations which obligate the largest companies to conduct HRDD processes in their activities and

[8] See Chapter Georgian Regulatory Framework, at p. 36, which discuss key matters in this regard.

[9] More information on the UNGPs is available at: https://www.ohchr.org/EN/Issues/Business/Pages/UNGPsBizHRsnext10.aspx

[10] OECD Guidelines for MNEs p.19



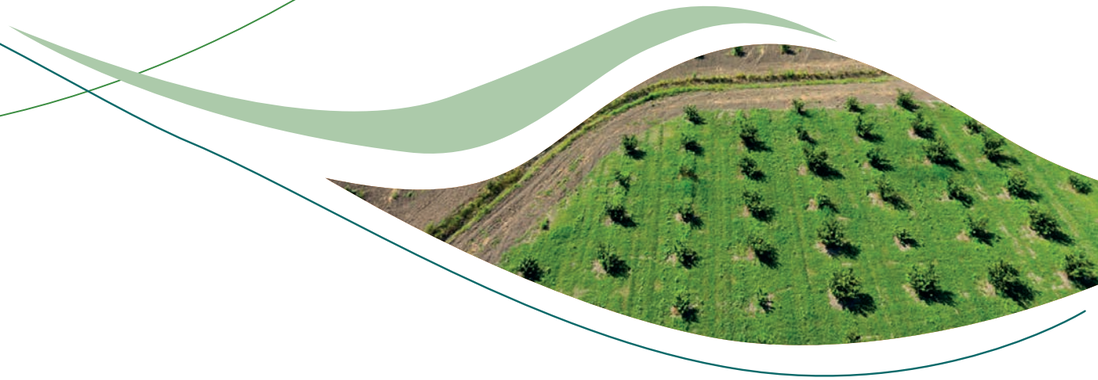
THE OVERVIEW OF APPLICABLE SUSTAINABILITY STANDARDS, PROFOUND, 2021.

report on the results. Such laws have been adopted and implemented in France,[11] the Netherlands,[12] Australia[13] and Switzerland,[14] among others. The EU has mandatory requirements for due diligence in timber and conflict minerals and, according to the statement of the EU Commissioner for Justice, it is also working to develop an overarching mandatory due diligence regulation that will encompass human rights and environmental issues in supply chains.[15] Beyond mandatory due diligence requirements, business enterprises do not have international obligations to monitor environmental or social impacts in their supply chains.[16]

Therefore, apart from the legal requirements in the country of origin, only national or international requirements on product safety and quality in destination states are applicable to business enterprises. For hazelnut producers in Georgia this means that they are subject to national regulatory frameworks on the three pillars (social, environmental and economic) of sustainable agriculture and their products are subject to international and destination countries' national food quality and safety requirements. However, international developments in the areas of business and human rights also suggest that hazelnut farmers may be required to assess their human rights impacts in the near future directly or through their role in large buyer companies' supply chain.

However, beyond mandatory requirements of sustainability in agriculture, there are various voluntary sustainability standards (VSS) that apply to products in international trade. The concept of responsible investment has been developed to ensure investments promote responsible business

[11] The Duty of Vigilance Law
[12] Dutch Child Labour Due Diligence Act
[13] The Australian Modern Slavery Act
[14] Law on private and military security companies
[15] https://www.europarl.europa.eu/RegData/etudes/BRIE/2020/659299/EPRS_BRI(2020)659299_EN.pdf
[16] See more on UN Draft Mandatory Treaty on Business and Human Rights discussed below.



practices, including in agriculture.[17] Development Finance Institutions (DFIs) apply this concept through employing environmental, social and governance (ESG) approaches to investment and conducting human rights, environmental or social risk assessments and rigorous monitoring.[18] There are a number of applicable policies and standards for DFI investments in agriculture such as, for instance, IFC performance standards[19] or World Bank guidelines.[20]

Moreover, a number of large buyers already require their suppliers to adopt sustainable approaches in their operations, which correlates with the fact that *globally consumers are increasingly opting for more sustainable choices*. For example, one of the largest hazelnut buyer companies, Ferrero has established responsible sourcing requirements for its suppliers through its Supplier Code.[21] The Code lays out requirements with respect to three pillars: **Human Rights and Social Practices, Environmental Protection and Sustainability and Supplier Transparency**. Ferrero has also developed the Hazelnut Charter – a document dedicated specifically to sustainable sourcing of hazelnuts which applies responsible sourcing pillars from the Supplier Code to Ferrero's hazelnut value chain.[22] Many other companies have also established internal sustainability initiatives, most of which are based on regulations or the voluntary standards listed below in sections regarding the *European Union*, *Key UN Sustainability Frameworks* and *International Sustainable Farming Standards*.

[17] See the principles of RI in agriculture, FAO. http://www.fao.org/3/au866e/au866e.pdf
[18] See for instance, https://toolkit.cdcgroup.com/sector-profiles/agriculture-and-aquaculture/
[19] https://www.ifc.org/wps/wcm/connect/Topics_Ext_Content/IFC_External_Corporate_Site/Sustainability-At-IFC/Policies-Standards/Performance-Standards
[20] https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/sustainability-at-ifc/publications/publications_policy_ehs_annual_crop_production
[21] See, https://www.ferrero.com/sustainability/fc-5290
[22] See, https://www.ferrero.com/sustainability/supplier-code

The below chart lists the most prominent companies and their respective practices or policies on hazelnuts.[23]

FERRERO	Hazelnut Sourcing Charter
OLAM INTERNATIONAL	Improving Social and Labour Conditions in the Hazelnuts Supply Chain
NESTLE	Resposible Sourcing: Hazelnuts
NUTELLA	Sustainability in hazelnut sourcing
BERRY CALLEBAUT	The Nut Sustainability Program
LINDT & SPRUENGLI	The Origin and Traceability of Hazelnuts

In conclusion, sustainable agriculture requirements are fragmented. Whereas generally all states apply product quality and safety regulations to exported agricultural goods, only few countries apply social requirements to business supply chains through mandatory due diligence requirements. However, comprehensive sustainable standards of production are required by various international investors, organizations and buyers which represent key players of the international food market. Moreover, as the increasing role of due diligence requirements for supply chains is becoming an international standard, there have been discussions of mandatory international and regional due diligence and responsible practice requirements from businesses.

[23] See, e.g., https://www.olamgroup.com/products-services/olam-food-ingredients/edible-nuts/hazelnuts/sustainability-in-hazelnuts.html,
https://www.nestle.com/csv/raw-materials/hazelnuts
https://www.nutella.com/hu/en/node/231
https://www.barry-callebaut.com/en/manufacturers/la-morella-nuts/sustainability-in-action
https://www.lindt-spruengli.com/sustainability/ingredients/hazelnuts

Examples include the promised EU mandatory HRDD regulation and the UN Business and Human Rights binding treaty.[24]

Considering that Georgia is an economy in transition, many local entities, including farmers, crackers, and traders, are engaged in transnational business by being a part of global supply chains (as demonstrated below, Georgian hazelnuts are largely meant for exports and mostly to the EU, which is a strong supporter of adopting binding instruments on business and human rights).

The responsibility to act sustainably for farmers, crackers, or traders, is a responsibility to ensure **sustainable economic growth** and **readiness** to respond in a timely manner to any state or international regulations or standards demanded from partners, based on legal or consumer-driven duties.

[24] Updates and information on the binding UN treaty on business and human rights can be accessed here: https://www.business-humanrights.org/en/big-issues/binding-treaty/

2

HAZELNUT FARMING PRACTICES IN GEORGIA

HAZELNUT SECTOR IN GEORGIA

Hazelnut (*Corylus avellana*) is a widespread culture in Georgia and has high value on the international market as well. The Georgian natural environment has supported the development of local hazelnut varieties, which have a high quality and are in high demand worldwide. Hazelnuts are a high caloric food and nutritious value (620-650 calories per 100g, with 15-16g protein and 4-10g fiber, it includes multiple minerals – calcium, phosphorus, potassium, as well as vitamin C).[25]

The main hazelnut producing countries are: Turkey, Italy, USA, Georgia, Azerbaijan and Spain.[26] Georgia is in the top 5 countries based on hazelnut production, however its production has increased during the past few years, becoming the third largest exporter worldwide with over 40,000 tons of hazelnuts produced and exported in 2020, amounting to 2.8% of the total international trade of Georgia.[27] Notably, nuts and hazelnuts came in second when it comes to the volume of income generated from exported products to the EU for January-February 2021, with USD 10.6mln.[28] Georgian nuts are mainly exported to the EU countries (Germany, Italy, Czechia), Russia, Turkey and China.[29]

The Georgian climate and natural conditions are a good precondition for high quality hazelnut farming on a wider scale. There are several prevalent endemic and foreign hazelnut species in Georgia, mainly on the territory of Western Georgia.[30] The volume of production has been extensively increasing during the past decade, reaching nearly 55,000 tonnes per year in 2020, compared to 27,000 tonnes in 2006 and 37,000 tonnes in 2011.[31] It is particularly notable that in 2013 hazelnut production peaked at 51,800 tonnes before being drastically diminished in 2014-2017 due to a

[25] See Plants for A Future profile for Corylus avellana, common hazelnut. Details at: https://pfaf.org/user/plant.aspx?LatinName=Corylus+avellana; Also see United States Department of Agriculture (USDA) Agricultural Research Service FoodData Central profile for hazelnuts or filberts: https://fdc.nal.usda.gov/fdc-app.html#/food-details/1100524/nutrients [links last accessed on April 10, 2021].

[26] Data obtained from UN Food and Agriculture Organization Statistics Page: http://www.fao.org/faostat [last accessed on April 10, 2021].

[27] National Statistics Office of Georgia (GeoStat). External Merchandise Trade in Georgia, 2020 Preliminary Results, 20.01.2021 (in Georgian only), available here: https://www.geostat.ge/media/35819/საქართველოს-საგარეო-ვაჭრობა---2020.pdf [last accessed on April 10, 2021].

[28] Sh. Tkeshelashvili, Georgia received 107mln USD from exports to the European Union – what are we selling to EU?, March 22, 2021, Business Media Georgia, available here: https://bm.ge/ka/article/2-tveshi-saqartvelom-evrokavshirshi-eqsportit-107-milioni-miigo---ras-vyidit-eu-shi/78482/ [last accessed on April 10, 2021].

[29] Data available from FAOSTAT [retrieved on May 26, 2021].

[30] More information on species and their characteristics are presented in the Hazelnut, Best Practice Textbook, UNDP Georgia and Swiss Cooperation Office (SCO) for the South Caucasus, 2016, pp. 7-27. Available in Georgian here: https://gfa.org.ge/wp-content/uploads/2018/11/თხილი.pdf

[31] 2020 data available from Georgian Hazelnut Growers Association, comparable data taken from Hazelnut, Best Practice Textbook, UNDP and SCO, 2016, p.5. supra 30. According to preliminary data from GeoStat, nuts (hazelnut, almond, nut, incl). production in 2020 was 40.9 thousand tons (32.4% increase). 2020 final data will be analyzed in June 2021. Agriculture of Georgia 2020 (Preliminary Data On Plant Growing), GeoStat, 16.04.2021, available here: https://www.geostat.ge/media/37742/Agriculture-of-Georgia---2020-%28Preliminary-Data-on-Plant-Growing%29.pdf

widespread stink bug infestation.[32] The potential of hazelnuts is even better, considering there is approximately 70-72,000 hectares (approx. 48% of which is less than 1 ha) of land available for hazelnut farming (though exact studies have not yet been conducted) and the yield could grow up to 2.5-3.5 tonnes per hectare.[33]

Despite a positive historical and natural basis for hazelnut production and rapidly increasing yield, there are still challenges in the field. The main challenge is that the price and quality of Georgian hazelnuts fall behind. The main cause for this is pests, however, unethical conduct of certain business operators plays a rather negative role in the perception of Georgian hazelnuts.[34] Georgia was the second largest producer of hazelnuts globally in 2017, earning over USD 170 million from exports. However, the stink bug (*Halyomorpha halys,* also known as Asian stink bug or the Brown marmorated stink bug) infestation damaged the market greatly.[35] Nevertheless, with a consolidated effort aided by various parties, Georgia is regaining its position on the world market.[36]

[32] In 2014 the yield was 33.8 tons, in 2015 - 35.3, 2016 - 29.5, while in 2017 - 21.4. Data source: GeoStat, 2018: https://www.geostat.ge/media/13795/2017-wlis-soflis-meurneoba.pdf

[33] Information obtained from GHGA, based on their studies and information gathered from all municipalities of Georgia. More detailed research (including through satellite data) is being planned. This information does not include the occupied Autonomous Republic of Abkhazia.

[34] Additionally see: Mariam Lukashvili, Georgian Hazelnut Price Falls Behind Its Competitors, EUGeorgia.info, March 20, 2017, available here: http://eugeorgia.info/ka/article/581/qartuli-txili-xarisxis-arastabilurobis-gamo-fasebit-konkurentebs-chamorcheba--/

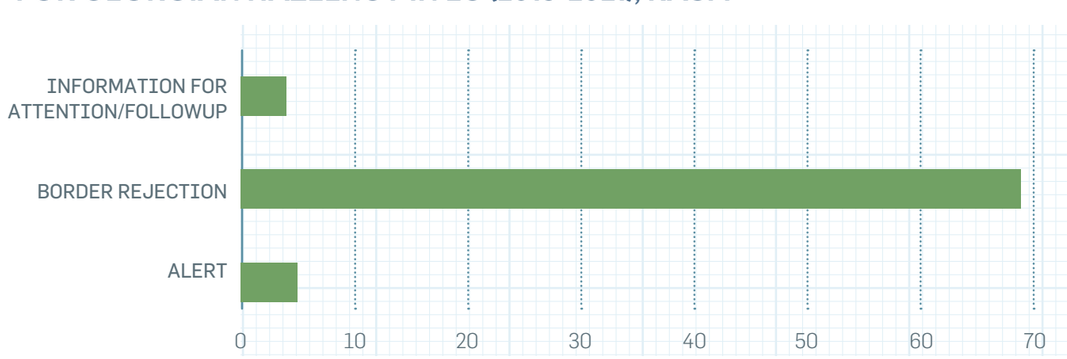
[35] One estimation from GHGA calculated that the damage to Zugdidi municipality alone from stink bug in 2014-2015 was approx. GEL 317mln for two years in total. Notably, 2014 was characterized with highest price on market, reaching GEL 20 per kg inshell hazelnut, currently at GEL 9-10. Source: Meeting with GHGA representatives and farmers, April 22, 2021.

[36] See Minister of Environmental Protection and Agriculture of Georgia underlining that Georgian Hazelnut has reached the goal of USD 100mln in exports, "We are reaching the point, where Georgian Hazelnut is regaining its leading positions", April 16, 2021, available in Georgian here: https://mepa.gov.ge/Ge/News/Details/20325
See also, brief analysis of the situation by Ukrainian Horticultural Association managed portal East Fruit: https://east-fruit.com/en/horticulture-market/market-reviews/georgia-risks-losing-more-than-80-million-on-the-export-of-hazelnuts/

Notably, there has been a false perception in the hazelnut farming industry that hazelnut plants need little care, limited fertilizer and nearly no pesticides, and this has been noted as one of the reasons for the wide spread of the stink bug and it took years to fight the pest off to regain high yield levels; this was also the cause of the extremely low price for Georgian hazelnuts, which has still to reach global average price.[37]

Notably, the spread of the pest is one of the reasons for the need of sustainable practices, particularly underlining the necessity to balance between sustainable approaches and the ability to produce a larger volume of harvest with good quality. Quality hazelnuts are vital on the road to increasing the price of Georgian hazelnuts, which is rather below the average market price. The major determinant in this is the high levels of toxins in Georgian hazelnuts – demonstrating that pest control or land fertilizing processes must take place with sustainable approaches.[38]

According to the European Rapid Alert System for Food and Feed (RASFF)[39] Georgian hazelnuts have been rejected on border nearly 70 times during the past five years, with the major reason being the presence of aflatoxins in either hazelnuts in shell, hazelnut kernels, ground hazelnuts or hazelnut flour. This number of rejections (particularly considering the presence of aflatoxins is judged as a serious risk) results in a lack of trust from importing countries, thus causing lower than market prices or low demand for Georgian product.[40]



[37] Authors' interview with GHGA representative, its members and the Minister of Environmental Protection and Agriculture (March 2021).

[38] Supra 37, brief analysis of market prices, Georgian hazelnut price determinants and challenges thereof.

[39] https://webgate.ec.europa.eu/rasff-window/portal/

[40] It is notable that aflatoxin presence can be caused due to several reasons, including transportation. GHGA representatives noted, that in some instances (though rarely) hazelnut may be delayed at the borders, causing it to develop mold. Thus, aflatoxin presence should not be linked only to wrongful hazelnut farming practices.

Studies have demonstrated that hazelnut exporters have underlined the high negative impact of re-testing frequency at EU borders, even though consignments are accompanied with aflatoxin test certificates (as required per Georgian and import country laws, in all cases), such re-tests cause delays, thus resulting in penalty payments from freight forwarders, as well testing fees (which need to be paid by the exporters); delays also result in renegotiated price from buyers or late payments, even cancellations undermining income and trust together.[41] Moreover, extended delays and inadequate transportation/storage conditions in duration may facilitate the growth of the fungi that produce aflatoxins and other mycotoxins, further aggravating the reputational damage for the Georgian hazelnut sector.

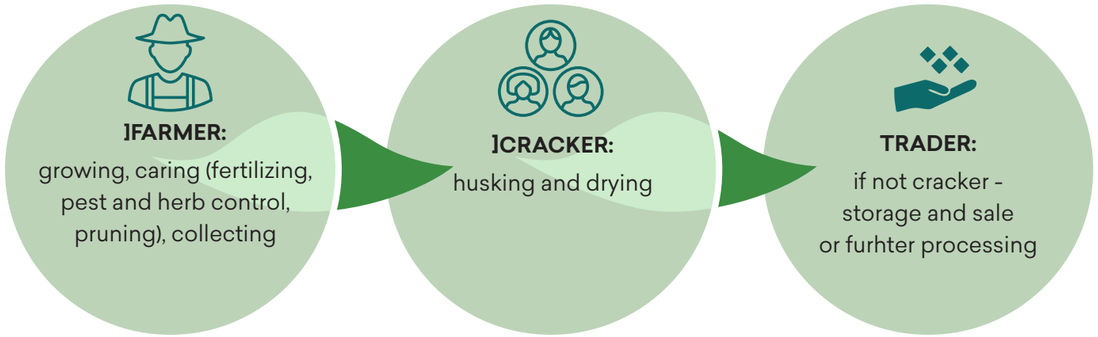
To address the core reasons for the reputational damage, as well as to keep up the pace with the global sustainable development effort, the Georgian hazelnut sector needs to align its practices with sustainable agriculture standards. In practice this entails that every actor in the hazelnut supply chain, including farmers of all size, crackers and traders, has to commit to the fundamental objectives of sustainable agriculture in their capacity and ensure that hazelnuts are produced in a manner that, along with aiming for economic profit, respects the environment and promotes socio-economic equity.

There are multiple regulations which aim to increase the quality of Georgian hazelnuts, which in turn should result in more competitive prices. Apart from the regulatory framework overview, this study investigated Georgian practices; we spoke with several actors in the market and analyzed the experience of the Georgian Hazelnut Growers Association, as well as state support programs. Overall, our observations reveal that the Georgian regulatory framework enables the establishment of sustainable approaches, however the resources – particularly knowledge resources – need to be further strengthened, including through popularizing sustainability and its capacity to increase the quality, reputation, demand and price of Georgian hazelnuts.

With the aim of creating a guiding basis for sustainable hazelnut farming, this study consolidates and systematizes the existing national and international standards of sustainable agriculture. It explores the regulatory framework in Georgia and the EU, as well as voluntary sustainable standards, initiatives and certification programs relevant to hazelnut farming. Finally, the study investigates hazelnut farming practices in Georgia. The report focuses on sustainability approaches – particularly on product safety and consumer rights issues, but also considers other pressing issues such as environmental protection, labor rights, community rights, etc. Along with systematizing sustainable agriculture standards, this study serves as a basis for the Principles of Sustainable Farming provided in the Part 2 of this Guideline.

[41] Regulatory and Procedural Barriers to Trade, United Nations Economic Commission for Europe (UNECE), 2018, p. 92, available here: https://unece.org/fileadmin/DAM/trade/Publications/ECE_TRADE_443E_Georgia.pdf

HAZELNUT SUPPLY CHAIN IN GEORGIA



The Georgian hazelnut supply chain includes farmers (small, medium or large-scale), crackers and traders. Sometimes crackers and traders are the same operator, ensuring cracking, processing and storage, and sale (mainly export). In most cases traders (or crackers at a trading stage) have direct contact with buyers (large companies purchasing hazelnut worldwide for their own use – such as chocolate producers, or other producers; or a medium company purchasing for further processing and/or sale to chocolate or other food producers).

In rare instances there are companies in Georgia handling all these stages themselves. Although their impact on the overall market is large, their sustainability approaches are frequently derived from the internal policies (such as AgriGeorgia, a subsidiary of Ferrero), thus they are not in the focus of this document.

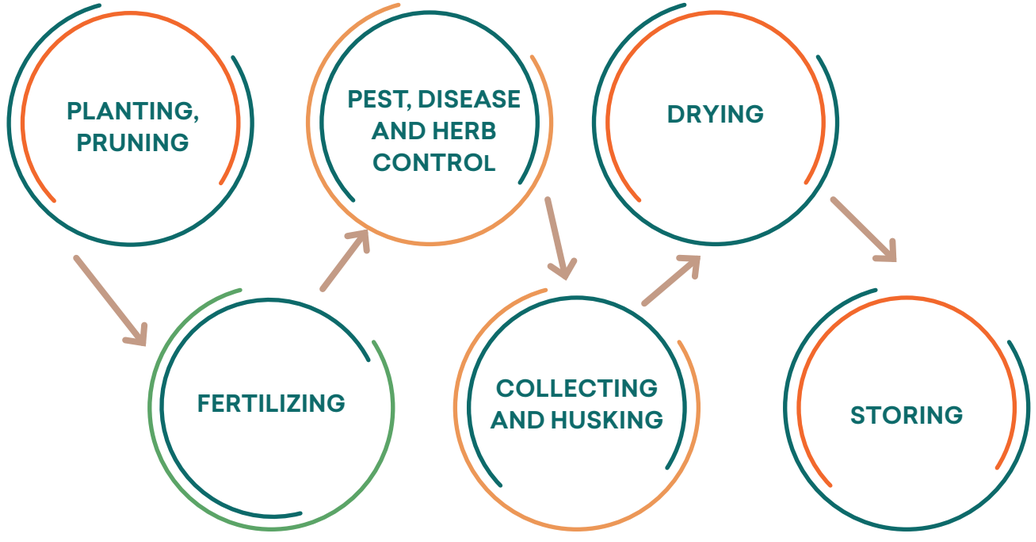
FOR THE PURPOSES OF THIS DOCUMENT, WE WILL GROUP GEORGIAN HAZELNUT FARMERS INTO THREE MAIN CATEGORIES:

SMALL FARMERS
- mainly family farms
- farmland below 1ha

MEDIUM FARMERS
- large family farms, or organized entities
- farmland between 1-10ha

LARGE FARMERS
- farmland above 10 ha.

IT IS ALSO INTERESTING TO LOOK INTO THE HAZELNUT FARMING PROCESS (FROM PLANTING TO STORING):



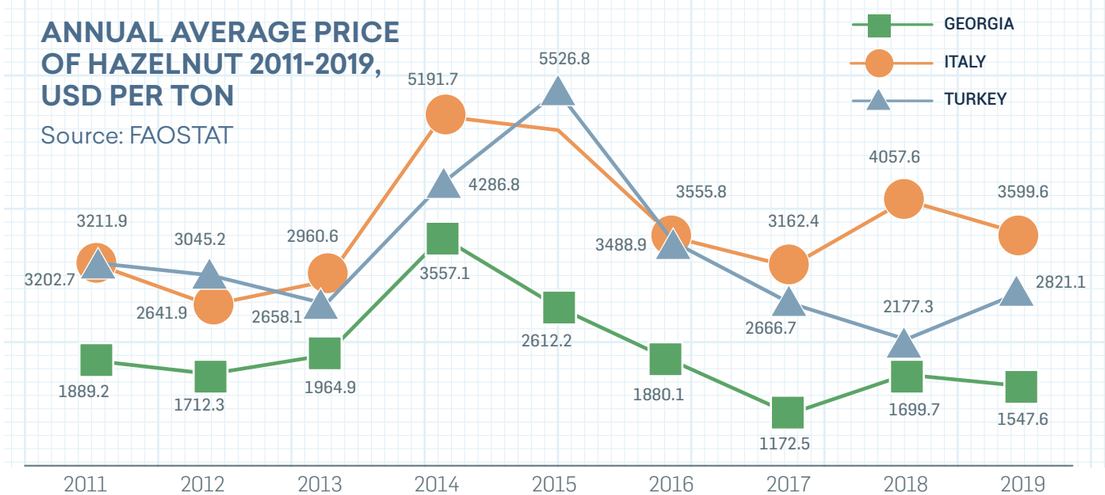
Post storage processes, such as cracking, roasting, chopping, grinding, etc. are not part of farming and are not considered as primary production – they are part of processing.

ECONOMIC IMPACTS

Income generated from hazelnuts plays a key role in local economic development. Georgia is one of the leading exporters of hazelnuts (top five according to FAOSTAT, and based on the most recent export volumes, Georgia took third place in the world in 2020). Hazelnut farming and production costs are rather low (below 10%), thus rather high levels of profit can be obtained (nearly 90%, compared to approx. 22-25% from wine).[42]

[42] Information based on GHGA observations and calculations, obtained during interview on April 22, 2021.

Notably, the price for Georgian hazelnuts is much lower than the price of its main competitors, which demonstrates the potential that can be tapped into by increasing its quality, credibility and sustainability.



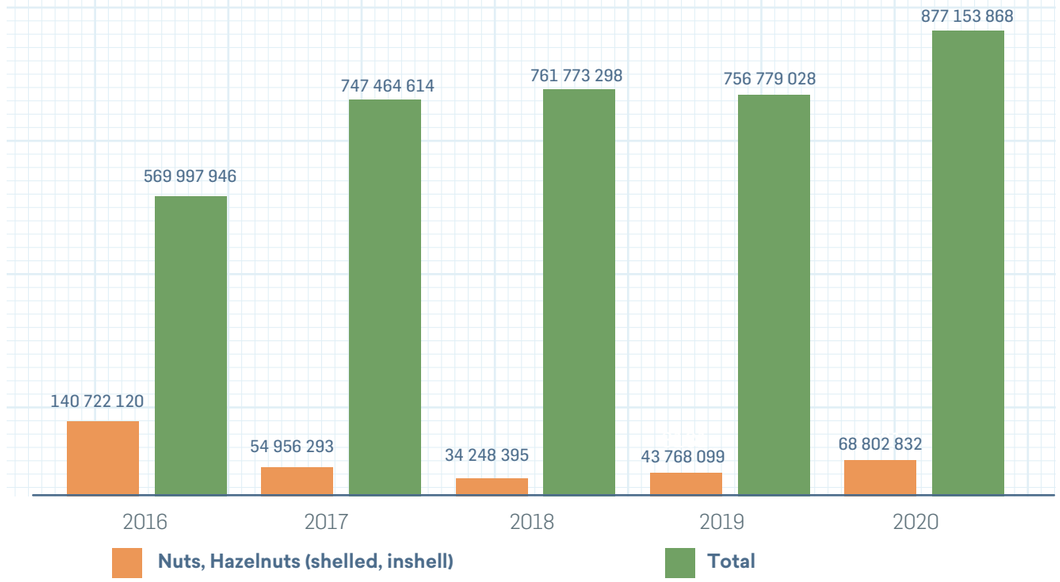
The allocation of farms demonstrates that nearly half of the farms in Georgia are small, however, their impact on the local economy is high. According to data from the Georgian Hazelnut Growers Association, an average farm (1.3ha) generates nearly 50% of annual income for a family of four.

There are several periods of hazelnut sales. Traders report that hazelnut farmers seek out buyers with certain transaction patterns. The most active periods include the period preceding the academic school year (most hazelnut harvests take place at this time), during holiday seasons (stored hazelnuts are sold before New Year and Easter, when high demand products see price increases on the market). Some farmers also try to store their harvest, waiting for higher prices and they frequently make sales when social needs arise (farmers often approach GHGA to help in arrange sales when they need funds for healthcare or other vulnerabilities and family urgencies. These periods often correlate with other economic fields, such as investing in rural tourism, other agriculture sectors, etc.[43]

[43] Source: interview with the President of GHGA on March 15, 2021.

NUTS, HAZELNUTS OR FILBERTS, FRESH OR DRIED, IN SHELL AND SHELLED EXPORTED FROM GEO TO EU COMPARED TO TOTAL IMPORT (USD)

Source: UN Comtrade



Per 2016 data, nuts and hazelnuts were one of the top agricultural products exported to the EU from Georgia, its share of total exports to the EU was 27.7 per cent, generating USD 141 million, nuts and hazelnuts in 2020 amounts to respectively 7 per cent of total export and USD 68 million.[44] The main importing countries for Georgian hazelnuts are Germany, Italy, Poland, the Russian Federation, Canada, Portugal, Spain and Switzerland, however no exact data is available for current demands.[45]

[44] Source: UN Comtrade: https://comtrade.un.org/data

[45] Source: interviews with GHGA representatives and members. Also see Barriers to Trade in Georgia, UNECE, supra 41, p. 109.

GEORGIAN HAZELNUT GROWERS ASSOCIATION PRACTICES

The Georgian Hazelnut Growers Association (GHGA) is one of the largest unions for farmers and the largest one for hazelnut growers in Georgia. There are 25,000 members in the Association (14 per cent of which are women), covering approx. 31,000 ha of hazelnut farms, with 2,600 working groups, aimed at increasing knowledge about hazelnut production and increasing its quality and yield. Working groups include several farmers with varying experience and knowledge (10-12 farmers in each group), meeting approximately twice a month in a workshop format at a farm of one of the members, where they discuss their specific approaches, practices, observations; sometimes, group members even exchange materials or machinery.

THE GHGA PROVIDES VARIOUS SUPPORT SCHEMES FOR FARMERS AND TRADERS.[46]

SERVICES OFFERED by THE GHGA

- **Farmer Service Centers - offering quality materials (pesticides, fertilizers, etc.)**
- **Soil testing support (lab analysis of minerals or other issues)**
- **Agrarian consultancy suport (at any farming stage)**
- **Hazelnut husking and drying**
- **Laboratory analysis of hazelnut in each stage**
- **Storing (with controlled levels of humidity and ensuring traceability)**
- **Facilitating sharing between farmers**
- **Facilitating sales**
- **Facilitating communication with other drying and storage service provides**
- **Supporting farmers› economic development with AgriCard**

[46] Information on GHGA practices were mainly obtained from the interviews with the President of the Association on February 17 and March 15, also from the interview with the Association representative on March 16 and April 22, 2021.

The drying process is very important when it comes to the quality of hazelnuts. Traditionally Georgian hazelnuts were sun dried, however, such a process requires close monitoring of temperature and humidity, which was rarely assured. Due to this, hazelnut quality frequently diminished, resulting in losses for farmers.[47] Notably, this is the main reason for the high **aflatoxin** levels in Georgian hazelnuts. Hazelnut can get moldy and develop fungi when they are not collected quickly from the ground or if they are collected with leaves, prunes or not husked in time. Another cause for the development of fungi is drying in unmonitored conditions or are stored or transported in humid conditions over a long period of time. Hazelnut is characterized with 25-30% humidity, drying ensures reducing this to minimal levels (benchmark - 6%). Mechanical drying offered by GHGA and traders is vital for high quality outcome (6% humidity is achieved through 3-6 days of drying depending on the input). At the same time, the drying equipment is extremely expensive, which is problematic for small and medium sized farmers, even large-scale farmers rarely manage to purchase such equipment.[48] Therefore, the availability of drying facilities in the vicinity of farms is vital. The same challenge also applies to storage facilities. Storage must be done under controlled conditions to maintain the quality (high quality hazelnut would achieve a pure weight of 42-45% from the inshell nuts, which cannot be reached if the product is not stored properly).[49]

GHGA also provides informative support such as trainings, workshops, knowledge sharing and other such services. It issues the annual Farmer Diary,[50] which is distributed to farmers, and which includes all necessary steps during farming, recommendations for fertilizing, pest and disease control, herbicide usage, and other practices.

The AgriCard program should be separately mentioned, as it is one of the most highly valued economic benefits for farmers. Farmlands in Georgia are often unregistered, in traditional ownership, although the State has been implementing special programs for ensuring land registration. It is a lengthy procedure (sometimes it takes up to 18 months), while farmers need access to financial institutions (loans, credit payments, etc.). This is particularly problematic for small farmers, who have no way of demonstrating their economic activity (as they are not obliged to pay taxes, no records are kept). AgriCard provides farmers with the opportunity to gain trust from financial institutions, as it serves as proof of business from GHGA.[51]

The association has high support from the Government of Georgia, which enables it to provide services either free of charge or at low prices. Small and medium farmers pay no fee for membership at this stage and all members enjoy various benefits.[52]

The GHGA facilitates the sale and export of hazelnut as well, which is its most demanded service. The Association offers its members prices based on international market levels. Additionally, hazelnuts can be stored in the Association's storage facilities and the GHGA ensures that the quality during storage will be maintained and when the sale is made, the price is determined based on the quality indicator at the start date of storage. The GHGA does not require an intermediary fee from the member farmers, thus the sale price offered has no additional fees associated with it. The GHGA makes sales both to intermediaries and factories producing hazelnut-based products.

The GHGA is working hard to establish various standards, including those related to sustainability and traceability. All hazelnuts stored and sold through the GHGA are fully traceable. Major buyers value traceability very much, thus GHGA's efforts in this regard are awarded with high interest from them and thus, high demand.

As for sustainability approaches in the Association, the following support is provided:

- provides information on sustainable farming and practices
- supports the reduction of chemical products in farming – fungicides are recommended to be organic products; bio-pesticides are used in demonstration farms (however, they do not work well against the stink bug, and, hence, farmers need to strike a balance between pest control and sustainability of agrochemicals), pheromones are recommended as much as possible, only pesticides and herbicides permitted by the EU are provided and recommended by the Association
- monitors members practices, to ensure no prohibited inputs (chemical or other) are used in farming
- record keeping is one of the topics for trainings and workshops, ensuring relevant threats, risks or other issues are well documented
- The Farmers Diary provides recommendation with highest possible standards safeguarding human health and environment protection – the scheme of farming includes specific recommendations on safety issues during fumigation; it also makes recommendations on the time of fumigation before harvest, to ensure the chemicals are not transferred into the kernel
- The fertilizing and irrigation procedures recommended by the Association are most eco-friendly (however, there are no recorded guidelines of this), at the same time, GHGA is involved in support schemes that enable farmers to establish energy efficient practices (for instance irrigation systems with lowest water consumption; soil fertilization processes through irrigation systems, etc.), however little is done for other energy sources – shell recycling is not a topic under GHGA attention (though it is sometimes used for drying machines), using or supporting renewable energy systems is also not an issue Association focuses on

[47] This was particularly underlined by the farmers interviewed by the authors on March 17, 2021.

[48] Small and medium farmers stated that they were mostly using GHGA drying facilities, however sometimes these facilities were not available due to high demand; a large-scale farmer stated that he initially planned to purchase facilities, but GHGA services were much more profitable, as the investment would require too many resources.

[49] One medium-size farmer considers purchasing drying or at least storing facilities, since GHGA facilities were not sufficient in his vicinity and his storage solution was insufficient.

[50] The Diary is renewed annually and distributed to all farmers. Diary includes: information on soil management, fertilizing plan (dosage, recommended period, percentage of minerals) and methods, pruning recommendations, Calendar for agriculture events, where farmers are given recommended periods for each event and they fill in the information on how and when they conducted them (recommended period, event, used product, method applied, combined scheme details), advisory on safety issues during fumigation, gathering and pre-drying storage recommendations, drying and storage process description, special pages for other record-keeping.

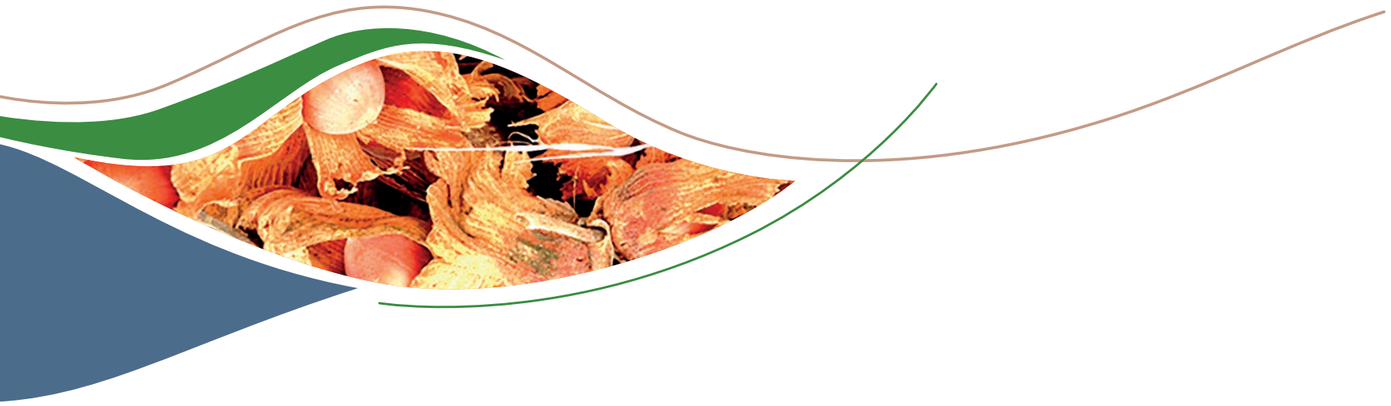
[51] Source: information gathered during meeting with farmers and GHGA representatives on April 22, 2021.

[52] Interview with the President of the Association and the Minister of MEPA.

- Child labor is prohibited for Association members and it is regularly mentioned in communications (however, no written documents/guidance are available)
- Balancing gender in the workforce is a priority to the Association (the GHGA tries to balance workforce, however this is not provided in written form)
- All members are encouraged to collaborate and share information, harsh competition is not a practice for the Association and its members
- GHGA noted in multiple interviews that various programs (through trainings, knowledge-sharing, SMS distribution, leaflets, and info-materials in the facilities, etc.) are offered to farmers to increase awareness of sustainability issues (mostly on sustainable practices, though written resources are limited).

The GHGA prioritizes small-size farms (below 1ha and in the future aims to include 0.5ha farms) in their support, this includes engaging these farmers in working groups, knowledge materials, as well as offering them services as a priority (drying, storage, laboratory analysis, sale facilitation). At the same time, the Association also tries to encourage cooperation, by supporting small farms in the same vicinities with machinery (fumigation, pruning and other machines).

Interviews with the GHGA demonstrated that their guidance and advice to farmers are mostly in line with sustainable agriculture standards and practices, however there is limited or no written documents, statistics, studies or other materials available, demonstrating the need for a systemic and established approach.



SOME PRACTICES FROM GEORGIAN HAZELNUT FARMERS

Humidity is high in western Georgia in the Kolkethi valley and specifically in the Samegrelo region, where most hazelnuts are produced. Therefore, irrigation is mostly not needed or only in a very limited amount, resulting in different water usage practices in eastern and western Georgian farms.

During the research, authors consulted with small, medium, and large farmers to get an overview on the main practices and characteristics in their work. These consultations aimed at painting a general picture and not providing representative research. Since farmers were GHGA members, most practices were similar amongst the members. Several conclusions and observations can be made from this process:

- Farmers, regardless of their size, are willing to establish any approach that will ensure high volume yield, high quality product and higher price
- They stated that their product never goes unsold, and the price is always the highest in Georgia, however it still is not as high as they wish
- Farmers emphasized that the drying, storing and sale facilities offered by the GHGA is a great asset to them, as well as training and services (particularly agronomic consultant)
- They were interested in energy efficient approaches, including reuse of waste, however the resources required for establishing them are far too high
- Farmers emphasize that sustainability is an interesting topic to them, however if it is hard to establish or requires financial burden, they will not be willing to participate
- Some farmers mentioned they had attempted establishing organic production practices, but the financial and yield outcomes were not worth the struggle (namely, the yield was rather low and the price was not high enough to balance the efforts), although there are some approaches that are still used (for instance, when available, they prefer to use manure for fertilizing, they use most efficient irrigation methods, they used pesticides with permissible compounds, etc.)
- Some practices are rather damaging to the environment (burning leaves, branches or other natural remnants, mostly in small volumes, but still – notably, all of them know this is damaging to both health and environment, however there is no more efficient waste management method available, they do try to use such waste in humus, but in limited amounts)
- Farmers always take precautionary measures during fumigation – whether for family members or employees, necessary protective equipment is always used
- To the topic of child labor everybody was sensitive about and emphasized that they never use children, even in their household farms, with only permissible engagement (bringing drinking water, was mentioned as such)
- Farmers stated that if sustainable approaches were a legal requirement, they would abide.

The GHGA has extremely high influence on farmers' practices, mainly resulting from past successful cooperation. Therefore, the Association is best placed to promote sustainable approaches and demonstrate the benefits thereof.

The biggest differences in approaches were found with regards to labor practices. Namely, small farmers (1ha) rarely used any employees (based on needs during fumigation mostly), medium farmers (5.8ha) used employees during the gathering/harvesting period whereas large-scale (50ha) farmer hired employees on a regular basis and additional employees during harvesting times.

All three farmer groups stated that labor safety standards were followed during work. Also notably, when employing seasonal workers (gatherers), they always followed an eight-hour workday schedule. Women are mostly employed in gathering (harvesting), which, according to the farmers was mainly because the men from the same households were engaged in their own harvesting processes or other rural activities. At the same time, since hazelnut farms are prevalent in the region,[53] they noted it is rather hard to find a sufficient workers, which frequently results in rather good working conditions and payment schedule, as the competition between employers is high.

Another issue that was subject to different practice was taxation – primary production subject to specific limits is free from taxation, however this was not assessed as a positive aspect by a farmer that chose to establish a legal entity (LLC) for better record-keeping, as legal entities are not subject to such tax exemptions, according to the farmer, a more honest and hardworking approach by a farmer was more burdensome and, in some regard, discriminatory.

[53] All respondents were from Samegrelo, which is the biggest producing region; notably GHGA underlined the difference in practices between regions, related mainly to varying climate conditions, namely difference in need to irrigate or drain the lands in East and West Georgia, also chemical use practices, which is higher in East, while in West fumigation has not been usual practice.

IT WAS INTERESTING TO HEAR IDEAS ON SEVERAL ISSUES FROM FARMERS:

WASTE MANAGEMENT

- Burning leaves, prunes, branches is rather wide-spread practice
- Waste collection is expensive, however, if there were incentives (vouchers, payment, etc.), farmers are ready to ensure waste collection and delivery
- Composting or other practices require specific knowledge, some attempts were made but not sufficient, more can be done through colective action

SUSTAINABILITY = HIGH PRICE OR = REASONABLE OBLIGATIONS

- Farmers were willing to spend resources to establish sustainable practices, however only if it results in high demand and high price
- On the other hand, if the government requires such approaches, they are ready to abide, provided it is not unreasonably burdensome, forcing them to give up this business
- Informative support from the government, GHGA, local or international organizations would be required in the process

ENERGY EFFICIENCY AND RENEWABLE ENERGY IS SUBJECT OF INTEREST

- Efficient use of water or energy sources was noted as an interesting topic and attempts were made to ensure such practices (special irrigation systems, for instance)
- Solar power or other alternative sources were also noted as something ineresting, particularly for medium and large farmers, however, this is long-term priority
- If special support schemes will enable the establishing of such practies, interest of participaton is high

INTERESTS OF NEIGHBORS ARE SIGNIFICANT

- Farmers noted that in their practice they do not have any negative impact on neighboring lands, however caution during fumigation or other processes is relevant
- Frequently small-scale farmers neighboring the large farms often benefit from the latter

Overall, farmers were open to new initiatives, provided it would lead to higher demand and higher benefits for them, at the same time ensuring any mandatory measures are feasible.

3

INTERNATIONAL REGULATORY FRAMEWORK OVERVIEW

The relevance of hazelnut production is rapidly increasing in Georgia considering its rank in exports; thus, this study will investigate the regulatory framework of Georgia, its international obligations and then move on to other relevant sources, forming the ground for establishing sustainable farming standards.

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Sustainable Agriculture and Georgia's International Obligations

Georgia is required to adopt, promote, and support sustainable development approaches by its international obligations. The **Association Agreement (AA)** between Georgia and the EU stipulates that both parties agree to promote international trade complying with **sustainable development approaches and objectives** "for the welfare of present and future generations."[54] The AA further stipulates that the sustainable development approach entails guaranteeing **core labour standards and decent work** (interpreted through ILO standards),[55] the implementation of multilateral **environmental governance** and agreements such as the UNFCCC and promotion of **fair and ethical trade schemes** and **corporate social responsibility** (interpreted through the OECD Guidelines for Multinational Enterprises).[56] The AA also affirms the need to protect biological diversity[57] and the sustainable management of forests.[58] Beyond explicit reference to sustainable development, the AA mentions cooperation in the field of environmental protection, including water quality, nature protection and chemicals management[59] as well as in the field of labour rights[60] and consumer protection.[61] Finally, the AA touches upon the issue of agriculture and wants to modernize **agricultural production** in a sustainable way and establish **quality policies and control mechanisms**.[62]

These provisions of the AA translate into concrete state obligations through Georgia's commitment to approximate its regulatory framework to the selection of EU regulations including in the spheres important for sustainable agriculture. These include the EU regulations on environmental protection.

[54] Article 227, Association Agreement between EU and Georgia, available here: https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:02014A0830(02)-20180601&from=EN

[55] Ibid. Article 229

[56] Ibid. Article 231

[57] Ibid. Article 232

[58] Ibid. Article 233

[59] Ibid. Article 302

[60] Ibid. Article 239

[61] Ibid. Article 346

[62] Ibid. Article 333

EXAMPLES OF THE EU REGULATIONS GEORGIA IS MOVING TOWARDS/ADAPTING:

REGULATORY SPHERE	REGULATION
ENVIRONMENT	Council Directive 91/676/EEC concerning the protection of waters against pollution caused by nitrates from agricultural sources
	Council Directive 92/43/EC on the conservation of natural habitats and of wild fauna and flora
	Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for Community action in the field of water policy
PRODUCT SAFETY	Directive 2001/95/EC of the European Parliament and of the Council of 3 December 2001 on general product safety
	Commission Decision 2009/251/EC of 17 March 2009 requiring Member States to ensure that products containing the biocide dimethylfumarate are not placed or made available on the market
LABOUR RIGHTS	Council Directive 91/533/EEC of 14 October 1991 on an employer's obligation to inform employees of the conditions applicable to the contract or employment relationship
	Council Directive 91/383/EEC of 25 June 1991 supplementing the measures to encourage improvements in the safety and health at work of workers with a fixed- duration employment relationship or a temporary employment relationship
	Council Directive 2000/78/EC of 27 November 2000 establishing a general framework for equal treatment in employment and occupation
	Council Directive 89/656/EEC of 30 November 1989 on the minimum health and safety requirements for the use by workers of personal protective equipment at the workplace
	Council Directive 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work

Additionally, Georgia has other international obligations and commitments that interconnect with the requirements and constitutive elements of sustainable agriculture. For instance, Georgia is a signatory to major international human rights treaties, 18 ILO conventions, and multilateral environmental agreements such as the UNFCCC, the Convention on Biological Diversity, and the Aarhus Convention.

This study explores international frameworks and standards important to sustainable farming by analysing the relevant frameworks for Georgia.

INTERNATIONAL REGULATORY STANDARDS THAT APPLY TO AGRICULTURAL PRODUCTION AND PROCESSING

REGULATORY FRAMEWORK OF THE EUROPEAN UNION

The European Union promotes sustainability in agriculture in its jurisdiction through the Common Agricultural Policy (CAP) which promotes economic, social and environmental sustainability standards in agricultural activities.[63] The CAP is closely aligned with the European Green Deal agenda[64] which, among other sustainability themes, includes policy objectives related to agriculture, food systems, climate change, biodiversity, energy, etc.[65] The From Farm To Fork Strategy included in the deal aims to build a **fair, healthy and environmentally-friendly food chain** that works for **consumers, producers, climate and the environment**.[66] Among other objectives of the strategy, it also encompasses the renewal of EU trade policies for imported food, including in key areas of animal welfare, the use of pesticides and antimicrobial resistance. The strategy also pledges that the EU will promote international standards and encourage the production of agri-food products complying with **high safety and sustainability standards**.[67] The EU Commission's White Paper on food safety additionally defines the guiding principles for the EU food policy.[68] These principles dictate that food safety policy must be based on an integrated approach throughout the food chain and indicate **traceability of food** as an instrument for a **successful food policy**.[69]

Apart from promoting sustainable agricultural production, the EU has also developed a

[63] Available here: https://ec.europa.eu/info/food-farming-fisheries/key-policies/common-agricultural-policy/cap-glance_en#thebenefitsofthecap; On economic aspect see: https://ec.europa.eu/info/food-farming-fisheries/sustainability/economic-sustainability_en; On social aspect see: https://ec.europa.eu/info/food-farming-fisheries/sustainability/social-sustainability/socially-sustainable-cap_en On environmental sustainability see: https://ec.europa.eu/info/food-farming-fisheries/sustainability/environmental-sustainability_en

[64] Available here: https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en#policy-areas

[65] Available here: https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1596443911913&uri=CELEX:52019DC0640#document2

[66] A Farm to Fork Strategy for a fair, healthy and environmentally friendly food system https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1590404602495&uri=CELEX%3A52020DC0381

[67] ibid. Section 4

[68] Available here: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:51999DC0719

[69] Chapter 2, paras. 8-10

comprehensive regulatory framework which lays out standards and specifications for food quality and safety, including matters relevant for the import of hazelnut and its products. The foundation for this framework can be found in the General Food Law Regulation[70] which lays down the general principles and requirements of food law on EU and national levels. The regulation establishes that food law should protect human life and health and consumer interests and promote fair practices in food trade such as the protection of animal health and welfare, plant health and the environment.[71] To ensure these objectives, the regulation describes the instruments that guarantee that unsafe food and feed are not placed on the market. Such tools include **traceability** under Article 18, which requires food and feed business operators **to be able to trace the food value chain through the processes of production, processing, and distribution, and keep records of who they supply**. The regulation also establishes the European Food Safety Authority which is the primary authority supplying scientific advice to EU institutions and member states and produce research on emerging issues and new hazards related to food safety.[72]

The core element of the EU's regulatory framework on food safety is the Regulation on the hygiene of foodstuffs.[73] The regulation lays down general rules for food business operators on food safety throughout the supply chain starting with **primary production** and establishes that the **same standards of hygiene should be applied to *imported* food**.[74] The regulation determines general and specific obligations for food business operators (FBOs) to ensure food hygiene and safety. These obligations include **controlling contamination arising from the air, soil, water, fertilisers, plant protection products and biocides and the storage, handling and disposal of waste** in primary production, transportation, distribution and other aspects of the value chain.[75] FBOs are also required to keep records in an appropriate manner and for an appropriate period, commensurate with the nature and size of the food business,[76] on any use of plant protection products and biocides, occurrence of pests or diseases that may affect the safety, the results of any relevant analyses carried out on samples taken from plants or other samples that have importance to human health.[77] The Regulation 852/2004 provides that these safety and hygienic programmes and procedures should be based on hazard analysis and critical control point (HACCP) principles and good hygiene practices (GHPs).[78]

Other regulations provide for more specific rules applicable to **hazelnuts**. For instance, Commission Regulation (EC) No 1881/2006 setting maximum levels for certain contaminants in foodstuffs determines maximum levels of contaminants, which, if exceeded, bans the product from the market.[79]

[70] Regulation (EC) No 178/2002, https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:32002R0178
[71] ibid. Article 5(1)
[72] Articles 22-23
[73] Regulation No 852/2004 https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32004R0852
[74] Article 1(1)
[75] Annex I, Part A. II - Hygiene Provisions
[76] Annex I, Part A. III – Record Keeping para. 7
[77] ibid, para 9
[78] On HACCP principles see: Article 5. On GHPs see: Article 1(1)(d).
[79] Available here: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32006R1881

Among other contaminants, the Regulation also applies to mycotoxins in food and regulates their maximum levels, including aflatoxins that are common in hazelnuts.[80] Commission Regulation (EC) No 401/2006 further lays down the methods of sampling and analysis for the official control of the levels of mycotoxins in foodstuffs, including hazelnuts and other tree nuts.[81]

Regulation (EC) No 1935/2004 lays down common rules for packaging materials and articles to protect human health and consumers' interests.[82] Regulation (EU) No 1169/2011 on the provision of food information to consumers establishes the general principles, requirements and responsibilities governing food information and food labelling, including providing specific rules for food causing allergies or intolerances, including hazelnuts.[83]

Foodstuffs (3)		**Maximum levels (µg/kg)**		
2.1.	Aflatoxins	B_1	Sum of B_1, B_2, G1 and G_2	M_1
2.1.1.	Groundnuts (peanuts) and other oilseeds (40), to be subjected to sorting, or other physical treatment, before human consumption or use as an ingredient in foodstuffs, with the exception of: — groundnuts (peanuts) and other oilseeds for crushing for refined vegetable oil production	8,0 (7)	15,0 (7)	—
2.1.2.	Almonds, pistachios and apricot kernels to be subjected to sorting, or other physical treatment, before human consumption or use as an ingredient in foodstuffs	12,0 (7)	15,0 (7)	—
2.1.3.	Hazelnuts and Brazil nuts, to be subjected to sorting, or other physical treatment, before human consumption or use as an ingredient in foodstuffs	8,0 (7)	15,0 (7)	—

Regulation (EC) No 396/2005 on maximum residue levels (MRLs) of pesticides in or on food and feed of plant and animal origin determines MRLs for food products including tree nuts and, more specifically, hazelnuts that are allowed to be imported in the EU market.[84] This 3471-page document defines MRLs for different pesticides for, among other products, tree nuts and hazelnuts.[85]

[80] Annex, Section 2: Mycotoxins
[81] Available here: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02006R0401-20140701&qid=1619182262591
[82] Available here: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32004R1935
[83] Available here: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32011R1169; Annex II - SUBSTANCES OR PRODUCTS CAUSING ALLERGIES OR INTOLERANCES para. 8
[84] Annex I, Part A, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02005R0396-20210106&qid=1619180538577
[85] A more user-friendly database for pesticides and MRLs is available here: https://ec.europa.eu/food/plant/pesticides/eu-pesticides-db_en and here specifically for hazelnuts: https://ec.europa.eu/food/plant/pesticides/eu-pesticides-database/products/?event=details&p=15

Additionally, the EU has also developed a separate framework for organic food, applicable to tree nuts and hazelnuts too. It is noteworthy that the demand for organic products is still growing and it is expected this trend will continue. The EU rules on producing and labelling organic products (from 2022), specific rules on organic production, labelling and control, Ecolabels, etc. create the foundation for this regulatory framework.[86] One of the key provisions of this regulation applies to group certification, which outlines basic principles for group certification and provides specific rules for what type of groups qualify for group certification.

KEY UN SUSTAINABILITY FRAMEWORKS

International organizations, states, NGOs and companies have developed a number of sustainability standards that are relevant for and applicable to agricultural production and processing. The report provides the overview of such key standards below, starting with the product quality and food safety standards.

FAO

The UN Food and Agriculture Organization (FAO) is the key actor that promotes sustainable agriculture and has produced several relevant guidance documents in this regard. FAO's 2014 publication "Building a Common Vision for Sustainable Food and Agriculture", elaborates the foundational principles of and central approaches to sustainable agriculture.[87] Furthermore, the FAO has developed a universal framework for Sustainability Assessment of Food and Agriculture systems (SAFA) that offers a common framework for measuring performance according to core sustainability themes such as governance, environmental, social and economic elements of agriculture.[88]

[86] Summaries of EU Legislation on EU rules on producing and labelling organic products (from 2021), available here: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=legissum%3A4353956; Specific rules on organic production, labelling and control, available here: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=legissum%3A4369553; Ecolabel, available here: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=legissum%3Aco0012

[87] See, http://www.fao.org/3/i3940e/i3940e.pdf

[88] SAFA Guidelines available at: http://www.fao.org/3/i3957e/i3957e.pdf; Other SAFA tools: http://www.fao.org/nr/sustainability/sustainability-assessments-safa/en/

FAO'S KEY PRINCIPLES TO SUSTAINABLE AGRICULTURE

PRINCIPLE 1. Improving efficiency in the use of resources is crucial to sustainable agriculture

PRINCIPLE 2. Sustainability requires direct action to conserve, protect and enhance natural resources

PRINCIPLE 3. Agriculture that fails to protect and improve rural livelihoods, equity and social well-being is unsustainable

PRINCIPLE 4. Enhanced resilience of people, communities and ecosystems is key to sustainable agriculture

PRINCIPLE 5. Sustainable food and agriculture requires responsible and effective governance mechanisms

The FAO has also developed international food standards, guidelines and codes of practice collected under its Codex Alimentarius. The voluntary standards provided under the Codex aim to protect consumers' health and ensure fair practices in the international food trade, as well as promote standard-setting and harmonization in food quality and safety.[89]

The General Principles of Food Hygiene elaborate on the core principles and safety measures under Good Hygiene Practices (GHPs) and the Hazard Analysis and Critical Control Point (HACCP) System and clarify the relationship between the two. The General Principles document refer to HACCP systems as the most sophisticated and advanced food hygiene mechanisms that is preceded by a prerequisite programme including GHPs, Good Agricultural Practices (GAPs) and other

[89] See, http://www.fao.org/fao-who-codexalimentarius/about-codex/en/#c453333

The Codex Alimentarius contains general standards pertaining to food quality such as the General Principles of Food Hygiene.[90] The latter outlines general principles for producing safe and suitable food for consumption by outlining necessary hygiene and food safety controls to be implemented in production (including primary production) and throughout the food chain, including specific food safety control measures at certain steps. The General Standard for Contaminants and Toxins in Food and Feed[91] is another crucial standard for food safety that contains the main principles in dealing with contaminants and toxins and lists the maximum levels and associated sampling plans of contaminants and natural toxicants.[92]

The Hazard Analysis and Critical Control Point (HACCP) system is an internationally recognized method of identifying and managing food safety related risks and uses the approach of controlling critical points in food handling.[93] It relies on scientific evidence and is employed to evaluate risks and establish preventative quality control mechanisms.[94] HACCP has a systematic nature and can be applied throughout the food chain. Apart from securing food safety, the application of HACCP systems also has other benefit such as harmonization and promoting international trade by increasing confidence in food safety. [95]

HACCP PRINCIPLE 1. Conduct a hazard analysis.

HACCP PRINCIPLE 2. Determine the Critical Control Points (CCPs).

HACCP PRINCIPLE 3. Establish critical limit(s).

HACCP PRINCIPLE 4. Establish a system to monitor control of the CCP

HACCP PRINCIPLE 5. Establish the corrective action to be taken when monitoring indicates that a particular CCP is not under control.

HACCP PRINCIPLE 6. Establish procedures for verification to confirm that the HACCP system is working effectively.

HACCP PRINCIPLE 7. Establish documentation concerning all procedures and records appropriate to these principles and their application.

[90] See, http://www.fao.org/fao-who-codexalimentarius/sh-proxy/en/?lnk=1&url=https%253A%252F%252Fworkspace.fao.org%252Fsites%252Fcodex%252FStandards%252FCXC%2B1-1969%252FCXC_001e.pdf

[91] See, http://www.fao.org/fao-who-codexalimentarius/sh-proxy/en/?lnk=1&url=https%253A%252F%252Fworkspace.fao.org%252Fsites%252Fcodex%252FStandards%252FCXS%2B193-1995%252FCXS_193e.pdf

[92] Multiple Georgian legislative acts govern these issues generally. For hazelnut farming, most refer to these principles and standards either directly or through reiterating them. For more details see p.31.

[93] Food safety through HACCP - The FAO approach, A.J. Whitehead and G. Orriss, http://www.fao.org/3/v9723t/v9723t0e.htm

[94] Hazard Analysis and Critical Control Point (HACCP) System and Guidelines for Its Application, http://www.fao.org/3/y1579e/y1579e03.htm

The FAO has also developed codes of practice for food safety for specific products, including tree nuts. The Code of Hygienic Practice for Tree Nuts applies to hazelnuts and aims to provide basic hygienic requirements for orchards, farm processing, and/or commercial shelling or inshell operations.[96] This includes the standards for environmental sanitation in growing and food production areas such as disposal of human and animal wastes, quality of irrigation water, pest, and disease control, harvesting, facilities and operating equipment, personnel hygiene, etc. The Code of Practice for the Prevention and Reduction of Aflatoxin Contamination in Tree Nuts[97] recommends practices on various stages of nut production to avoid this particular type of contamination based on good agricultural practices (GAP), good manufacturing practices (GMP) and good storage practices (GSP). The FAO's pesticide database provides details on acceptable uses and Maximum Residue Limits (MRL) of various pesticides for agricultural products, including hazelnuts and other tree nuts.[98]

UNECE

The United Nations Economic Commission for Europe (UNECE) was established with the core aim to promote pan-European economic integration. UNECE facilitates greater economic integration and cooperation among its member countries and promotes sustainable development and economic prosperity through policy dialogue, negotiation of international legal instruments, development of regulations and norms, exchange and application of best practices as well as economic and technical expertise, technical cooperation for countries with economies in transition.

One of UNECE's priority areas is agriculture. The UNECE Working Party on Agricultural Quality Standards (WP 7) has developed internationally agreed upon commercial quality standards for agricultural produce and respective interpretative recommendations. Hazelnut quality is included under the Dry and Dry Produce (DDP) set of standards which covers various types of nuts and dried fruits and vegetables.[99] The particular standards applicable to hazelnut are DDP-03 (inshell hazelnuts)[100] and DDP-04 (hazelnut kernels).[101]

[95] ibid.

[96] See, http://www.fao.org/fao-who-codexalimentarius/sh-proxy/it/?lnk=1&url=https%253A%252F%252Fworkspace.fao.org%252Fsites%252Fcodex%252FStandards%252FCXC%2B6-1972%252FCXP_006e.pdf

[97] See, http://www.fao.org/fao-who-codexalimentarius/sh-proxy/it/?lnk=1&url=https%253A%252F%252Fworkspace.fao.org%252Fsites%252Fcodex%252FStandards%252FCXC%2B59-2005%252FCXP_059e.pdf

[98] For hazelnut-specific pesticides see: http://www.fao.org/fao-who-codexalimentarius/codex-texts/dbs/pestres/commodities-detail/en/?c_id=255

[99] Available here: https://unece.org/trade/wp7/DDP-Standards

[100] Available here:https://unece.org/fileadmin/DAM/trade/agr/standard/dry/dry_e/03InshellHazelnuts_e.pdf

[101] Available here: https://unece.org/fileadmin/DAM/trade/agr/standard/dry/dry_e/04HazelnutKernels_e.pdf

These standards have been widely applied in international trade. The OECD has provided an illustrative interpretation of both standards in a publication under the framework of the activities of the Scheme for the Application of International Standards for Fruit and Vegetables.[102]

UNECE Standard **DDP-03** applies to the **marketing** and **commercial quality control** of inshell hazelnuts intended for direct consumption or for food without further processing. The standard applies at the export control stage, after preparation and packaging but prohibits sale, marketing, or delivery of hazelnuts not in conformity with the standard in later stages too. The standard establishes the minimum quality requirements that concern **rancidity, development, discolorations, shape, integrity, cleanness, presence of mould and pests,** etc. It also lays out the requirements regarding moisture content, classification, sizing, and permissible tolerances in respect of quality and size for each class and the standards for presentation and marking such as uniformity, packaging, identification, nature and origin of produce and commercial specifications.

UNECE Standard DDP-04 specifies these requirements for hazelnut **kernels** and adds specific considerations regarding the **minimum quality requirements and tolerances.**

[102] Available here: https://www.oecd-ilibrary.org/docserver/9789264166721-en-fr.pdf?expires=1619010209&id=id&accname=guest&checksum=4AF1F875ACD35E579D01B090891A5E2C

OTHER INTERNATIONAL SOURCES FOR RELEVANT OBLIGATIONS

International Human rights

Human rights of workers and other individuals or groups affected by business operations are protected by the international framework comprising of the UN, the International Labour Organization (ILO) instruments and other international and regional frameworks. These instruments impose these obligations on signatory and ratifying states to ensure that human rights are protected, including from mistreatment by businesses. States fulfil these obligations by establishing legislative and policy frameworks that reflect the minimum requirements set by the international framework and creating mechanisms and institutions to ensure the enforcement of legislative and policy rules.

The sufficiency and effectiveness of this traditional framework with respect to human rights harms and risks by corporations have been questioned and criticised. To address this issue, the UN Guiding Principles on Business and Human Rights (UNGPs) have been elaborated. The UNGPs establish a novel framework of protect, respect and remedy, and lay out the corporate responsibility to respect human rights and avoid adverse human rights impacts, or address them when they occur (Principle 11). The minimum scope of this responsibility is defined by human rights under the UN and ILO frameworks (Principle 12).

Although, there is ongoing work on the binding UN treaty on business and human rights, UNGPs are of a voluntary nature. However, the standard of corporate responsibility to respect human rights has been adopted into the policies and standards of many companies and organizations, including under sustainability requirements and initiatives. Influenced by the UNGPs, leading countries such as the UK and France have developed mandatory human rights due diligence (MHRDD) regulations and recently the EU parliament also voted to adopt a regulation requiring companies to conduct human rights and environmental due diligence in supply chains. Translated into practice, this will impose obligations on the companies to effectively assess their suppliers through a human rights lens, including labour rights of their permanent or temporary employees.

Labour rights

Labour rights as human rights stem from Article 23 of the Universal Declaration of Human Rights (UDHR) which provides for "the right to work, to free choice of employment, to just and favourable conditions of work and to protection against unemployment." Additionally, it stipulates that workers have the right to just and favourable remuneration, without discrimination, and the right to form and join unions. Article 24 of the UDHR lays down the right to rest and reasonable working hours.

These provisions have transformed into state obligations through, among others, the International Covenant on Economic, Social and Cultural Rights (ICESCR). Article 6(1) imposes an obligation on states party to the covenant to safeguard the right to freely chosen work. Article 7 establishes the "right of everyone to the enjoyment of just and favourable conditions of work" including fair wages and equal remuneration (with particular emphasis on women) that provides a decent living, safe and healthy working conditions, rest, leisure and limited working hours, periodic holidays and

THE UN TREATIES PROTECTING LABOR RIGHTS:

- Universal Declaration of Human Rights
- International Covenant on Economic, Social and Cultural Rights
- Convention on the Elimination of All Forms of Discrimination against Women
- Convention on the Rights of the Child
- International Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families

public holidays. Other UN human rights treaties also encompass protection for labour rights for disadvantaged groups. These include Article 11 of the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW), Article 32 of the Convention on the Rights of the Child, and the International Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families.

The International Labour Organization (ILO) has played a key role in translating the UDHR and ICESCR labour provisions into practical guidance for national contexts. The ILO has laid out the labour standards and rights under its **eight fundamental conventions** that cover the issues of forced labour, establishing and joining trade unions, equal remuneration and discrimination, and four governance conventions. Beyond this, the ILO has also created a vast number of technical conventions and recommendations that cover different components of the right to work such as workers safety and health, minimum wages, worker-employer relations and other issues.

The ILO instruments also focus on protecting specific groups such as children (C182 - Worst Forms of Child Labour Convention), women (P089 - Protocol of 1990 to the Night Work (Women) Convention (Revised)) and migrant workers (C143 - Migrant Workers (Supplementary Provisions) Convention). Additionally, the ILO framework has also selected sectors with specific standards. One such sector is agriculture that is in the focus of two up-to-date conventions and corresponding recommendations: C129 - Labour Inspection (Agriculture) Convention, and C184 - Safety and Health in Agriculture Convention. Other ILO instruments relevant to hazelnut farming include: C170

THE ILO FUNDAMENTAL CONVENTIONS

C029	Forced Labour Convention, 1930
C087	Freedom of Association and Protection of the Right to Organise Convention, 1948
C098	Right to Organise and Collective Bargaining Convention, 1949 (No. 98)
C100	Equal Remuneration Convention, 1951 (No. 100)
C105	Abolition of Forced Labour Convention, 1957 (No. 105)
C111	Discrimination (Employment and Occupation) Convention, 1958 (No. 111)
C138	Minimum Age Convention, 1973 (No. 138)
C182	Worst Forms of Child Labour Convention, 1999 (No. 182)

- Chemicals Convention, C141 - Rural Workers' Organisations Convention, C158 - Termination of Employment Convention.

Georgia has ratified 18 ILO Conventions including eight fundamental conventions, two governance conventions and eight technical conventions.

Other Human Rights

Beyond labor rights, hazelnut farming can have adverse impacts on other human rights which are protected by international frameworks. These impacts may occur at any stage of the hazelnut value chain and affect a wide range of stakeholders such as consumers, local communities, and others.

The right to health of consumers may be impacted if safety and hygiene standards are not adhered to in the supply chain and the product is compromised through toxins or contaminants. Local communities may also be affected if farmers do not maintain safety standards in their agricultural practices and apply highly toxic agrochemicals in a manner that endangers the health of

surrounding community members. Their health may also be compromised if agricultural practices cause environmental degradation and affect the quality of air, soil or water. The right to the highest attainable standard of health is recognized under Article 12 of the ICESCR.

The right to a healthy environment is increasingly recognized by the international community[103] and is present in the Constitution of Georgia. It can be negatively impacted by irresponsible farming practices and excessive use of pesticides, herbicides and fertilizers, as well as by the expansion of farmlands into natural ecosystems and diversion of natural resources for farm necessities. Local communities often suffer immediate negative impacts on the right to healthy environment caused by agricultural practices, but other parts of the population may also be impacted by long-term and cumulative adverse effects of irresponsible farming. Finally, by aggravating climate change, irresponsible farming greatly contributes to the global climate crisis.

Farming contributes positively to the development of rural regions as it creates jobs and attracts additional resources. However, in rare cases, the expansion of farming may also cause a rise of prices for food and housing, or divert public resources from welfare and social infrastructure to areas relevant to agriculture. The agricultural sector may also absorb water and land resources in certain areas. These effects will have an adverse impact on **the right to an adequate standard of living** under Article 11 and other socio-economic and cultural rights and freedoms under the ICESCR.

International Environmental Standards

Georgia is party to a number of multilateral or bilateral environmental agreements which impose corresponding obligations for the state including in the agriculture sector.[104] The most consequential and relevant environmental agreements that guide sustainable approaches to farming are listed below.

The Convention on Biological Diversity (CBD) entered into force in 1993 and has three main objectives: the conservation of biological diversity, the sustainable use of the components of biological diversity and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources. Its Cartagena Protocol on Biosafety entered into force in 2003 and aims to ensure the safe handling, transport, and use of living modified organisms (LMOs) resulting from modern biotechnology that may have adverse effects on biological diversity, taking also into account risks to human health.[105]

The United Nations Framework Convention on Climate Change (UNFCCC) entered into force in 1994 and seeks to stabilize greenhouse gas concentrations "at a level that would prevent dangerous anthropogenic (human induced) interference with the climate system."[106] The UNFCCC put more pressure on industrialized countries and directed funds to combat climate change, especially in developing countries.

The International Treaty on Plant Genetic Resources for Food and Agriculture was adopted in 2001 and aims at recognizing the enormous contribution of farmers to the diversity of crops that feed the world; establishing a global system to provide farmers, plant breeders and scientists with access to plant genetic materials; ensuring that recipients share the benefits they derive from the use of these genetic materials with the countries where they have originated.[107]

The Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade entered into force in 2004. The convention aims to promote shared responsibility and cooperative efforts in the international trade of certain hazardous chemicals in order to protect human health and the environment from potential harm, and to contribute to the environmentally sound use of those hazardous chemicals by facilitating information exchange about their characteristics, providing for a national decision-making process on their import and export and disseminating these decisions to involved parties.[108]

The United Nations Economic Commission for Europe (UNECE) Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (Aarhus Convention) entered into force in 2001. It establishes public rights in environmental matters to (a) access environmental information, (b) participate in the environmental decision-making and (c) access justice.[109]

These and other environmental agreements establish certain standards that the state is obligated to take into account and implement in the national regulatory framework. This also includes the sector of agriculture and shapes state actions in this regard too, by dictating higher standard for sustainability in farming.

[103] For example, see the Framework Principles on Human Rights and the Environment, Report of the Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment John H. Knox, UN Human Rights Council, 24 January 2018, A/HRC/37/59, Annex (The Framework Principles on Human Rights and the Environment, 2018

[104] For the full list see: https://iea.uoregon.edu/country-members/Georgia?field_inclusion_auto_value=All&page=3 (accessed on 25 May 2021)

[105] For more information, see: https://www.cbd.int/intro/ (accessed on 25 May 2021)

[106] For more information, see: https://unfccc.int/process-and-meetings

[107] For more information, see: http://www.fao.org/plant-treaty/overview/en/

[108] For more information, see: http://www.pic.int/TheConvention/Overview/tabid/1044/language/en-US/Default.aspx

[109] For more information, see: https://ec.europa.eu/environment/aarhus/

4

THE GEORGIAN REGULATORY FRAMEWORK

As noted above, hazelnuts produced in Georgia are largely exported and this document also seeks to increase and improve possibilities of exporting Georgian hazelnuts and the benefits thereof. Georgia is one of the few countries that regulates not just the production of hazelnuts, but their export as well. Therefore, it is interesting to summarize the Georgian regulatory framework relevant to production, food safety, consumer rights and export, which are applicable and significant for the hazelnut field.

PRODUCTION REGULATION

Georgia, mainly through the process of approximation with the European Union and harmonization with the EU Law, has adopted or amended multiple legislative acts, many of which cover sustainability issues. Notably, these laws rarely touch on sustainability directly, but they do mention issues relevant to it. The following section of the study will focus on the most important topics to Sustainable Farming Standards for hazelnuts in Georgia.

CONSUMER RIGHTS – PRODUCT SAFETY AND FREE MOVEMENT CODE

There is no special law dedicated to consumer protection in Georgia. There was one prior to 2012, but it has since been replaced by the Code of Product Safety and Free Movement (hereinafter, Product Safety Code, the code resonates with EU regulatory framework, whereby product safety issues are regulated and when in compliance, the product should not be impeded in trade).[110]

One of the aims of the code is to **protect human life, health, property and the environment,** along with the goal of placing safe products on the market, ensuring competition and facilitation in the product movement, ensuring conformity of facilities with technical risks and establishing an inspection system.

The principles of the Product Safety Code prioritize minimal requirements for product safety, uniform, and a non-discriminatory approach to products with similar features. It further outlines the **preference of international standards** when it comes to standardization, the application of technical **barriers to trade only to protect human health, safety and the environment**.

The Product Safety Code does not cover primary food products (such as hazelnuts). However it is still relevant since it provides an overview of the supply chain and forms the basis for traceability, technical regulations and standards.

The code sets several main requirements:

(a) The manufacturer shall be obliged to place only safe products, as provided by the law, on the market

(b) The manufacturer shall be obliged, within its scope of competence, to warn customers of any visible or invisible risks contained in the product when used as intended and within a predefined period

(c) The Manufacturer must not distribute any product that, to the best of its knowledge and belief, fails to comply with the mandatory safety requirements

(d) The warning shall not release a person from complying with the requirements determined by the law

[110] Law of Georgia adopted on May 8, 2012, latest version in Georgian available here: https://matsne.gov.ge/ka/document/view/1659419, official English version (may not be latest) is available here: https://matsne.gov.ge/en/document/view/1659419

(e) The manufacturer and distributor are required to provide customers with information if requested to allow the latter to make a well-informed choice, most of which should be in Georgian

(f) Employers must take all necessary precautions to ensure that a product used in the workplace is safe

(g) On a customers' request, a seller shall be obliged to give them safety-related information of a product

(h) Customers shall be entitled to defend their rights in court or in an appropriate state body

(i) The manufacturer shall be liable for damage caused by defective products it has placed on the market

(j) The time and statutory limitations to making a claim for compensation by consumers are also envisaged by the code

THE FOLLOWING SHALL BE CONSIDERED WHEN ASSESSING THE SAFETY OF A PRODUCT:

product **characteristics:** composition, packaging, assembly, and installation and repair instructions,

the impact on another product, when it is likely to be used together with this product within reasonable use,

product **presentation, labelling, warnings, instructions** for its use and disposal or any other information,

age categories of customers for whom it might be harmful to use this product.

PRODUCT IS NOT REGARDED AS UNSAFE, DUE TO A HIGHER LEVEL OF SAFETY IN A FIELD OR THE EXISTENCE OF A SAFER PRODUCT.

The Product Safety Code sets the basis for the Technical Regulation, which is a legally binding act including technical norm and shall be adopted as such by the Government of Georgia. The code regulates general principles safeguarding human health, life, property and the environment. It hereby sets the framework of such Technical Regulations, the requirements for its contents and its adoption.

It also provides basis for a standard, which is a voluntary document developed on the basis of consensus and registered by the standards body and provides means to meet the requirements of the Technical Regulations.

The Product Safety Code also regulates conformity issues and accreditation procedures (chapters VII-IX), setting main scope and principles, as well as procedures for these issues.

CONSUMER RIGHTS – FOOD SAFETY AND PLANT PROTECTION

The Law of Georgia on "Food/Feed Safety, Veterinary and Plant Protection Code of Georgia" (hereinafter, the Food Safety Code)[111] is the main basis safeguarding human health and life, consumer interests, animal health and welfare and plant health. Additionally, there are by-laws or other regulations relevant to consumer protection, some of which will be discussed below as well.

The Food Safety Code provides the main framework by defining the most relevant notions, such as primary production, genetically modified organisms, organic production, plant, animal products, waste, pesticides and certain diseases.

Primary Product - a product intended for human, or animal consumption obtained from primary production before being processed (including from the soil), as a result of animal breeding, hunting or fishing.

Primary Production - plant cultivation (including harvesting, fruit picking); pre-slaughter raising, breeding of animals, and milking. Primary production also includes hunting, fishing, and gathering of wild plants.

Plant - live plants and their parts (including seeds and genetic material).

Food Safety Code, Article 2.

[111] Law adopted on May 8, 2012. Latest Georgian version available here: https://matsne.gov.ge/ka/document/view/1659434
Official English version available here (may not be latest): https://matsne.gov.ge/en/document/view/1659434

The Food Safety Code is built on four principles of food/feed safety, veterinary and plant protection:

RISK ANALYSIS	Risk **assessment** containing hazard identification, hazard description, hazard impact evaluation, risk description, Risk **communication** - timely and unhindered exchange of impartial information, Risk **management** - selecting appropriate measures from proper alternatives to reduce, eliminate and prevent risks.
PREVENTION	When there is doubt of threat - temporary risk management issues, measures proportionate to hazard, and reviewed in reasonable period.
TRANSPARENCY	Risk assessment process open to public.
PROTECTION OF CONSUMER INTERESTS	Consumers provided with necessary, accurate, complete information; Consumers protected from attempts to be deceived and misled.

The Food Safety Code requires special protection measures for plants (including hazelnuts):

(a) The territory of the country shall be protected from **penetration, importation and spread of quarantine pests**

(b) Plants, products of plant origin and other regulated phytosanitary objects **shall be protected from pests** through the application of phytosanitary measures

(c) Prevention of **harmful effects of pesticides and agrochemicals on human and animal health and the environment;** and **phytosanitary certification** of regulated phytosanitary objects shall be provided

This code also establishes traceability requirements. ***Traceability shall be ensured at the stages of production, processing and distribution of food/feed, animals, plants, products of animal and plant origin, veterinary drugs, pesticides and agrochemicals.*** To perform traceability, business operators shall have **appropriate information** and shall **maintain the relevant documents and records**. For this purpose, business operators shall introduce systems and procedures that can provide competent bodies with such information upon request. Food/feed, animals, plants, products of animal and plant origin, veterinary drugs, pesticides and agrochemicals shall be **labelled** as determined by the Government of Georgia, while *genetically modified organisms* or food/feed made from them shall be labelled according to the relevant Law of Georgia.[112]

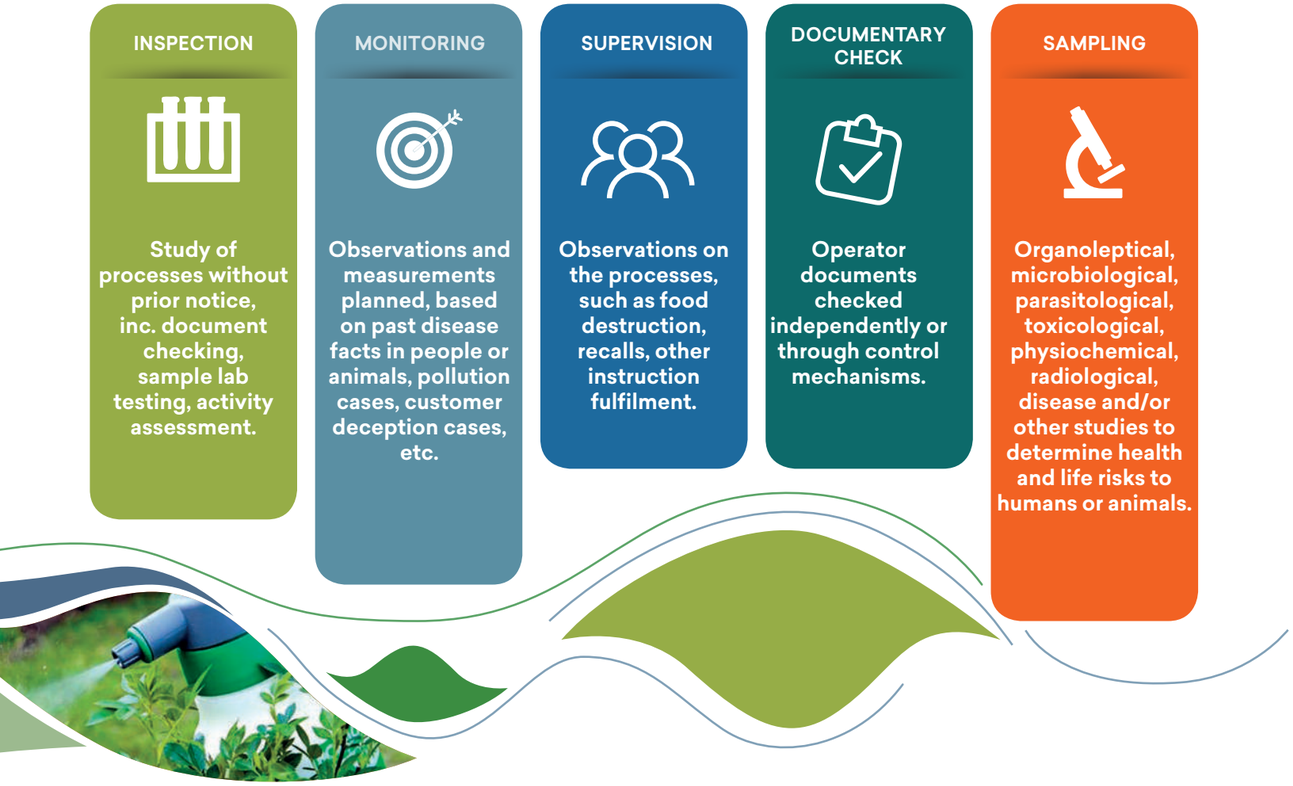
The Food Safety Code of Georgia establishes duties for business operators in various sectors of food production (e.g., animal produce, poultry, beverages, etc.). For the purposes of this study, we will investigate the duties established within plant protection field:

BUSINESS OPERATORS CARRYING OUT PRODUCTION, PROCESSING AND/OR DISTRIBUTION OF PLANTS AND PRODUCTS OF PLANT ORIGIN (incl. household producers) SHALL:

- **protect** plants and products of plant origin, as well as the site of production of plants and products of plant origin from quarantine pests
- **prevent harmful effects** of used pesticides and agrochemicals on **human and animal health and the environment**
- **fulfil** relevant agencies' instructions to prevent a mass spread of dangerous pests that pose a threat to the health of plants
- **cooperate** with the relevant authorities in the implementation of preventive and liquidation measures against the spread of pests
- immediately **inform** the relevant agency in the case of detecting quarantine pests and/or a reasonable doubt about them
- **record** the measures taken on the site of production of plants and products of plant origin against the spread of pests and the remedies used for the protection of plants

[112] Article 17 of the Food Safety Code. Supra 111. Regulations on traceability and labelling will be elaborated further below.

The Food Safety Code establishes the National Food Agency,[113] which is the main state institution responsible for the execution of the Food Safety Code and associated regulations. The agency ensures an information flow with business operators, other state agencies, public, provides oversight on operators and collaborates with various institutions. The agency is also responsible for state control, which envisages food/feed safety control, veterinary control and phytosanitary control. The law lists the measures for such control as well:



The Food Safety Code also establishes a registry of veterinary drugs, pesticides and agrochemicals and prohibits the use of any of these products if they are not registered in Georgia upon production or import. It also provides regulations for crisis management, plant and veterinary quarantines and other issues.

Finally, the code also includes administrative responsibilities with fines, recalls or other sanctions for the violation of the rules set by it (Chapter XV). These responsibilities include nearly all issues, including but not limited to traceability requirements (fine GEL 200), non-conformities discovered during control are fined based on the type of non-conformity – the one that poses risks to human life or health may be fined up to GEL 1,000, labelling violations are also based on the type of violation and the times the violation occurs.

[113] http://nfa.gov.ge/En/

TRACEABILITY REGULATIONS

Since January 1, 2016 special regulations on traceability have been in force in Georgia, which set the requirements for business operators to set up traceability systems.[114]

The goal of traceability principles and standards is to enable the National Food Agency to take measures and **protect the rights of consumers** through restricting the placement on the market/ prohibiting or recalling the food/feed, any substance used within, plant or animal, or product derived from plant or animal, veterinary drug, pesticide, or agrochemical which are in non-conformity with set requirements.

General principles of traceability include:

(a) To discover the **reasons** why a non-conforming product has been produced and to take necessary measures

(b) To **maintain relevant documentation** and **records** by the business operator, and to have systems and procedures put in place to provide the National Food Agency (NFA) with such records

(c) To **document** production history and/or locations at the stage of producing, processing, and distribution

(d) To ensure the **possibility of tracing** different members in the supply chain e.g., producing, processing, and distribution, as well as the consumer, except for the end-user

The regulation requires business operators to maintain records and appoint responsible individuals to oversee traceability.

LABELLING REGULATIONS

Labelling is an issue where Georgia has been introducing regulations actively since 2016. As of now, there is one technical regulation in force covering the issue of informing the consumer regarding the food,[115] another technical regulation governs traceability and the labelling of genetically modified organisms (suspended until January 1, 2023),[116] and the Law on labelling GMO products.[117]

Information on food should be provided in a way that protects the **health** and **interests of consumers,** ensuring that informed end-users can make informed choices and use safe food, considering **health, economic, environmental, social and ethical factors.**

[114] The Ordinance N577 of November 10, 2015 of the Government of Georgia on Approving the General Principles and Requirements for Traceability in Food/Feed Safety, Veterinary and Plant Protection Fields, available in Georgian here: https://matsne.gov.ge/ka/document/view/3047408

[115] Technical Regulation on Informing the Consumers regarding the Food, approved by the Government of Georgia Ordinance N301, of July 1, 2016, available in Georgian here: https://matsne.gov.ge/ka/document/view/3328780

[116] Technical Regulation approved by the Ordinance of Government of Georgia N548, of November 16, 2018, available here: https://matsne.gov.ge/ka/document/view/4367791

[117] Law of Georgia On Labelling of Genetically Modified Organisms Designated for Food Products/Fodder and Genetically Modified Products Produced from them. Available here: https://matsne.gov.ge/ka/document/view/2634028

The Technical Regulation on informing consumers regarding food sets general requirements and procedures for labelling food products. It defines main notions relevant to the regulation (food enzyme, food supplement and specific supplements, flavorings, etc.).

The obligatory information shall include:

(a) Name/type of food and its content, characteristics, and other features

(b) Information on health of consumers and safe consumption:

a. Description of content, which can be harmful for certain group of consumers

b. Shelf life, storage and safe use

c. Health impacts, including risks and results from harmful or threatening consumption

d. Information on nutritional value, relevant for an informed choice

The regulation sets down a specific list of information, as well as the duties of business operators on when and where to provide such information and in what form.

Notably, the regulation gives an additional list of products, which should be clearly marked in any product (primary or processed), such as allergy-inducing products (including hazelnuts), specific substance-containing food (such as glycerin, sweetener, caffeine, etc.)

TOXIC SUBSTANCES REGULATIONS

Contaminant - any substance in food that is not intentionally added but is present in food as a result of its production, processing, packaging, transportation, storage, as well as phytosanitary, veterinary and zootechnical measures, and / or environmental pollution. Contaminants do not include, for example, insect parts, animal fur, etc.

The Georgian legal framework also covers certain toxic substance regulations, some of which are relevant to this study. As mentioned in the introductory section, Georgian hazelnuts have been rejected from the EU border due to quality issues related to mycotoxins or fungi. Therefore, this document will investigate the relevant Technical Regulations. One Technical Regulation setting the thresholds for contaminants has been in force since July 1, 2016.[118] The regulation provides a list of contaminants for types of food and the requirements set thereof.

The regulation sets threshold limits on mycotoxins (part 2), which particularly relate to various types of nuts (hazelnut, nut, pistachio, almond, other nuts). The list sets values for 18 different foods or their processed versions, the regulation then provides special rules for hazelnuts specifically (also peanuts, and dried hazelnuts), namely hazelnuts and dried hazelnuts, which are in non-conformity with the thresholds set by certain paragraphs (2.1.5-2.1.8 and 2.1.10-2.1.11) of the regulation with regards to **aflatoxins** may still be placed on the market on the condition that: (a) it is **not intended for direct human consumption** or use as an ingredient in food; (b) it **complies** with the maximum limit set by other paragraphs, with lower levels (2.1.1-2.1.4, 2.1.9 and 2.1.12, all of which are in compliance with Commission Regulation (EC) No 1881/2006); (c) in order to **reduce pollution** (contamination), it is **subject to sorting or other physical processing**, after which the maximum limit specified in paragraphs 2.1.5-2.1.8, 2.1.10 and 2.1.11 of this Technical Regulation is not exceeded and does not generate harmful waste within this process (also in compliance with Commission Regulation (EC) No 1881/2006); (d) the **label shall state**, the purpose of the food and instructions for use - "For direct consumption of food or use as an ingredient in food, aflatoxin contamination shall be reduced through sorting or other physical processing" – this label should be placed on each package/box and accompanying document. The batch identification code must be placed on each packaged unit (package, box) and in the accompanying document.

Another regulation relevant for this study covers mycotoxin sampling and analysis, which has been in force since January 1, 2018.[119] While the above regulation sets limits for mycotoxin contamination, the following one lays out the rules for laboratory testing and methods when state monitoring is being conducted. The regulation provides detailed procedures for sampling and lab testing, and it also separately sets rules for all nuts (hazelnut, nut, almond, pistachio, etc.), which should be used for detecting aflatoxin B1 and the total aflatoxin amount in them. The rules touch on in-shell and kernel sampling and relevant increment or sample sizes, as well as formulas that allow for calculating overall contamination.

As mentioned, these thresholds are applicable to all business operators that place hazelnuts (or other food) on the market and the detection approaches are used during state monitoring. Pursuant to Georgian law, hazelnuts are under special regulation and these rules may also be used for reference for export control (see below section – Export regulation).

[118] Ordinance of the Government of Georgia N567, of November 9, 2015 on approving Technical Regulation Setting the Permissible Threshold for Some Contaminants in Food, available here: https://matsne.gov.ge/ka/document/view/3046872

[119] Ordinance of the Government of Georgia N497, of November 7, 2016 on approving Technical Regulation regarding the Sample Collection and Analysis Methods to Establish Mycotoxins in Food, available here: https://matsne.gov.ge/ka/document/view/3429104

EXPORT REGULATION

Georgia is one of the few countries which regulates the export of hazelnuts. Such a decision was caused by the increased number of border rejections from partner countries (at least 20% of exported hazelnuts were subjected to border controls, due to damaged reputation), which resulted in a deterioration of trust towards the Georgian product and losses in income; as a result of approving the technical regulation for exporting hazelnuts, Georgia saw a decrease in border rejections and even border control, with the perspective of regaining trust from EU buyers.[120]

The Technical Regulation on Hazelnuts[121] regulates common hazelnuts and cultivated hybrids thereof (in-shell hazelnut, kernel, processed kernel) and is applied to business operators who export hazelnut kernel and/or processed hazelnuts. It establishes rules for in-shell hazelnuts, hazelnut kernel or processed kernel; requirements regarding safety, packaging and labelling; hygiene requirements for business operators and conformity control procedures for hazelnut and its produces.

The regulation provides the definition for over 50 terms, including the types of hazelnut products (inshell, kernel, dry, various shapes, etc.), states of hazelnut (moldy, rancidity, rotten, etc.), impacts (pressed, processed, roasted, diced etc.) and other relevant issues (crop periods, conformity notions, etc.).

Notably, the regulation establishes a notion of "**Declared Standard**", which ***is a standard used by a producer and the usage of which it indicates, including the internal standard.***

The regulation establishes requirements for each type of hazelnut, providing classes of quality (which also include in-shell size, kernel dryness level, etc.) and the procedures for monitoring for conformity with these standards. It also defines safety and packaging issues. As for labelling, the regulation states that this matter is established by the recipient country's legislation.

[120] Interview with the Minister of Environmental Protection and Agriculture, Mr. Levan Davitashvili, March 30, 2021. Also see: Georgia regulates hazelnut production to boost exports, Fresh Plaza, April 18, 2016, available at: https://www.freshplaza.com/article/2156593/georgia-regulates-hazelnut-production-to-boost-exports/ and Ana Akhalaia, Technical Regulations on Hazelnut Approved, April 18, 2016, Georgia Today, available at: http://gtarchive.georgiatoday.ge/news/3570/Technical-Regulations-on-Hazelnut-Approved [links last accessed on March 25, 2021].

[121] Approved by Government Decree N185, April 18, 2016, available only in Georgian here: https://matsne.gov.ge/ka/document/view/3259738 [last accessed on March 25, 2021].

The regulation ***requires any operator exporting hazelnuts to establish procedures in conformity with Hazard Analysis Critical Control Point (HACCP)***[122] principles.

As for monitoring procedures, the Regulation establishes that the National Food Agency of the Ministry of Environmental Protection and Agriculture ensures control *with regards to these regulations and the* ***declared standards***. Additionally, a business operator is obliged to conduct lab testing when exporting hazelnuts based on these standards and submit test results, declarations and evidence of internal controls to the Food Agency. The Revenue Service of Georgia (RS) proceeds with customs clearance only after the Food Agency approves the conformity of the goods..

Per the regulation, if a producer has a Declared Standard (including an internal one), conformity with it is checked on a mandatory basis by the Food Agency before export and only after conformity is confirmed and evidenced does the Revenue Service allow customs clearance.

TAX REGULATIONS

Georgia has a special tax system for agriculture products to support the production and the export of goods. According to the Tax Code of Georgia (2010), certain activities are exempt from taxation.[123] Namely, individuals employed (including self-employment) in agriculture are exempt from income tax if taxable income earned from the *primary supply* of agricultural products produced in Georgia does not exceed GEL 200,000 for a taxable year (until January 1, 2023); at the same time an employee engaged in agricultural production is also exempt from tax income payments if the employer's gross income received from that activity does not exceed GEL 200,000 (before 1 January 2023) .[124]

Additional exemptions are in place for agricultural cooperatives with the objective to support the growth of agricultural activities. Therefore, movable items (except for land)

When hazelnut is produced by an individual, he/she does not have to pay income tax for his/her income from the production, or the income tax for the employees used during this production, if the total annual income from this production is no more than GEL 200,000.

[122] Available here: https://www.fda.gov/food/guidance-regulation-food-and-dietary-supplements/hazard-analysis-critical-control-point-haccp [last accessed on March 25, 2021].

[123] Tax Code of Georgia, 17.09.2010, available at: https://matsne.gov.ge/en/document/view/1043717 [last accessed on March 25, 2021].

[124] Tax Code of Georgia, article 82, paragraph 1, subparagraphs "j" and "z[1]".

owned or leased by the cooperative and used for agriculture activities are free from property taxes (until January 1, 2023) and respective income or profit are also not taxed.[125]

And most importantly, there is no export tax in Georgia and exports are not taxed with VAT either.[126]

ORGANIC PRODUCTION

Georgia has introduced a regulation for organic production, which applies to hazelnuts as well.[127] These regulations aim to preserve biodiversity, protect the environment, conserve natural resources, safeguard consumer interests, and increase export potential. At the same time, they protect businesses producing organic products (or "eco", or "bio" labelled product). Georgian law enables voluntary certification for organic production, and the name "organic", "eco" or "bio" is a protected name that can only be used for products certified under this standard.

According to the regulations, the label "organic production" requires a farming/production management system using methods which ensure preservation of biodiversity, ecological or biological balance; environmental protection; efficient use of natural resources; and responds to the requirements set by the regulations for the stages of production, processing, storage, packaging, transportation, labelling, distribution and sales.

General principles of organic production are:

(a) Using only living organisms and biological or mechanical methods of production from within the ecosystem

(b) Preventive and control measures against pollution and pest or disease control based on risk assessment

(c) No use of genetically modified organisms (GMOs) and products thereof, except of those designated for veterinary treatment

(d) No use of ionizing radiation during processing of raw material production

(e) No use of hydroponic production in plants

(f) Using only organically produced resources – through natural substances and low-soluble mineral fertilizers

(g) Maximal reduction of non-renewable and external resource consumption

(h) Strict restriction of the use chemical synthetic substances, except those permitted by the Regulation, and only if no other method of management is available, or when using organic resources pose a threat to the environment

[125] See more details in Tax Code of Georgia, article 99, paragraph 1, subparagraphs "e" and "f"; article 100, paragraph 4, subparagraph "g", article 130, paragraph 4[1], article 206, paragraph 1, subparagraph "ff[1]".

[126] Tax Code of Georgia, article 172, paragraph 4, subparagraph "e".

[127] Regulation of the Government of Georgia N198, of July 30, 2013.

(i) Prevention of pollution from the conversion farm adjacent to the organic farm

(j) Maintaining an appropriate, detailed record of the measures taken and the means used

These principles correspond to the principles set by the UN Food and Agriculture Organization for organic production.[128] While the regulation provides detailed guidance for organic production, including specific principles for organic production management and manufacturing, as well as principles for plant farming, livestock, beekeeping, poultry, aquaculture, wine, etc., principles and rules are also provided for conversion (transforming towards organic production), as well as processing, storing, transportation, labelling and realization (sale).

Some of these principles are relevant to hazelnut farming as well, uch as:

- Maintaining soil fertility and vitality, combating erosion and increasing fertility
- Preserving biodiversity, ecosystem unity and balancing local and regional ecology
- Providing plant nutrition through soil
- Ensuring reuse of waste (from both plants and livestock)
- Combating pests and diseases through selection, correct seed rotation, mechanical and physical measures, and the use of natural enemies
- Avoiding the excess and inappropriate use of water, as well as water contamination

More specific principles also include issues which are relevant to hazelnut farming, for instance:

- Multi-annual rotation programs to ensure soil fertility and bioactivity, as well as maintaining biodiversity, the cultivation of legumes, green manures or deep-rooting plants; incorporation of organic material (composted if possible) in the soil, using by-products from livestock farming, such as farmyard manure
- Using fertilizers (both compost and otherwise) and at the same time, maintaining the threshold of 170kg of nitrogen per hectare
- Use of microorganisms is allowed to maintain soil structure, also for activating compost
- Organic fertilizers should not contaminate water
- It is prohibited to use nitrogen-based mineral and chemically synthesized fertilizers; polychloride products, etc.
- If using polycarbonate products for soil cover layer, they should be removed after use and not burned

The Organic Production Regulation also provides detailed information on certification and the duties of business operators. It has an annex with a list of substances allowed for soil fertilization, plant protection, nutrition, technological additives, conversion ingredients, and other production/ management issues.

[128] Available here: http://www.fao.org/3/y2772e/y2772e0b.htm

This analysis focused on issues of high relevance and complexity, while labor and environmental regulations, including environmental impact laws and waste management, competition laws and relevant responsibilities (administrative or criminal)[129] are also significant for the topic of sustainable farming. However, these topics were not covered above as the study revealed that there is a rather high understanding amongst farmers and active engagement from multiple stakeholders working on improving awareness on these issues(including from labor safety inspection, environmental oversight agencies, civil society organizations, associations, etc.). At the same time, these issues have no specific application for farmers or crackers/traders and have a general application.[130] Notably, regulations in environment protection are indeed relevant to hazelnut farming (particularly with regards to soil, water, and air), however the overview above provided specific topics covering environmental issues from most prevalent issues and sustainability perspectives.[131]

It is worth noting that GLOBALG.A.P. recently published a National Interpretation Guideline – GLOBALG.A.P. Risk-Assessment on Social Practice (GRASP) for Georgia, which covers the above mentioned issues in detail, providing an in-depth source for various issues in labor (legal framework, minimum wage, discrimination, child labor, work hours, safety, and other issues) in farming.[132]

FAOLex provides a detailed list of Georgian legislative acts relevant to all sectors of agriculture, climate, environment, etc., and which is updated regularly.[133]

[129] See Law on Competition, May 8, 2012: https://matsne.gov.ge/en/document/view/1659450; Civil Code of Georgia (on good faith and fair dealing, contractual issues and civil liabilities), June 26, 1997: https://matsne.gov.ge/en/document/view/31702; Criminal Code of Georgia (for relevant environmental, labor (child labor, forced labor, etc.) or other liabilities), July 22, 1999: https://matsne.gov.ge/en/document/view/16426; Administrative Offences Code of Georgia, December 15, 1984 (for relevant offences in environment, labor, safety or other fields): https://matsne.gov.ge/en/document/view/28216

[130] See, e.g., Labor Code of Georgia (Organic Law), December 27, 2010: https://matsne.gov.ge/en/document/view/1155567; Organic Law on Labor Safety, February 19, 2019 (only in Georgian): https://matsne.gov.ge/ka/document/view/4486188; Law on Labor Inspection Service, September 29, 2020: https://matsne.gov.ge/ka/document/view/5003057; Law on Trade Unions, 30 November, 2018: https://matsne.gov.ge/en/document/view/4382851; Law on Elimination of All Forms of Discrimination, May 2, 2014: https://matsne.gov.ge/en/document/view/2339687; Law on Funded Pensions (establishing mandatory contributions from employee, employer and matching by the state), August 6, 2018:
https://matsne.gov.ge/en/document/view/4280127

[131] See, e.g., Law on Environmental Protection, October 12, 1996: https://matsne.gov.ge/en/document/view/33340; Environmental Assessment Code, June 1, 2017: https://matsne.gov.ge/en/document/view/3691981, Law on Environmental Liability, March 2, 2021 (only in Georgian):
https://matsne.gov.ge/ka/document/view/5109151. Official text of all laws can be found on Matsne.gov.ge.

[132] (GRASP) conducted in 2020-2021. here: https://www.globalgap.org/.content/.galleries/documents/210201_GRASP-Interpretation_GL_V1_3-1-i_Georgia_en.pdf

[133] http://www.fao.org/faolex/country-profiles/general-profile/en/?iso3=GEO

The below chart lists the major regulatory framework of Georgia as reference points for the specific topics within labor, environment protection and ethics issues

LABOR LAW

- Organic Law Labor Code
- Organic Law on Labor Safety
- Law on Labor Inspection Service
- Law of Georgia on Trade Unions
- Law of Georgia on Elimination of All Forms of Discrimination

ENVIRONMENTAL LAW

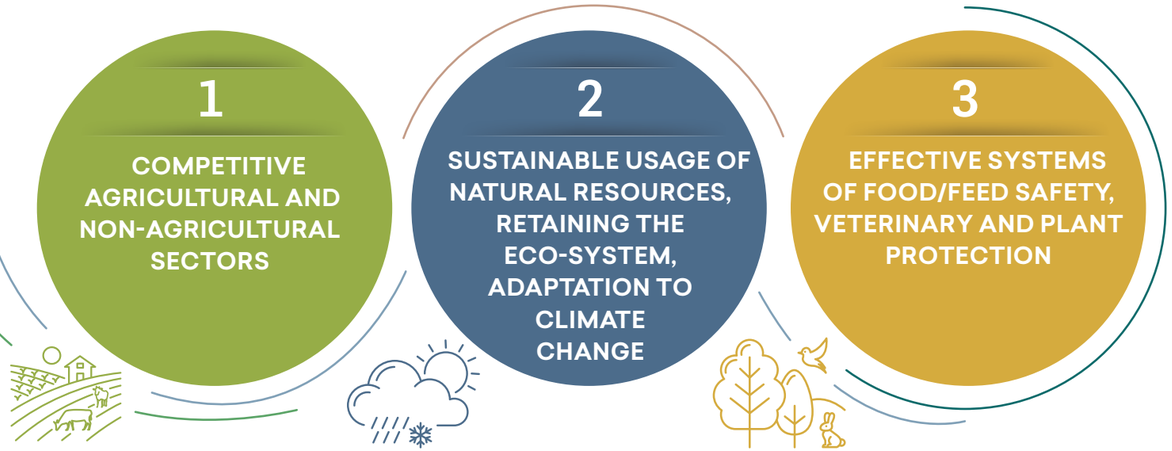
- Law of Georgia on Environmental Protection
- Environmental Assessment Code of Georgia
- The Law of Georgia on Environmental Liability
- Waste Management Code of Georgia
- Law of Georgia on Living Genetically Modified Organisms
- Law of Georgia on Ambient Air Protection
- Organic Law of Georgia on Agricultural Land Ownership
- Spatial Planning, Architecture and Construction Code of Georgia
- Law of Georgia on Soil Conservation and Restoration-Improvement of Soil Fertility
- Law of Georgia on Energy and Water Supply
- Law of Georgia on Water
- Law of Georgia on «Red List» and «Red Book»

ETHICS, INTEGRITY AND LIABILITIES

- Law of Georgia on Competition
- Civil Code of Georgia
- Criminal Code of Georgia
- Administrative Offences Code of Georgia

STATE ROLE IN SUSTAINABLE HAZELNUT FARMING

Georgia is one of the most active countries when it comes to promoting the Sustainable Development Agenda, it has nationalized 93 out of 169 targets from all 17 Sustainable Development Goals.[134] This dedication demonstrates that Georgia holds sustainability in high regard and at the same time, the Rural Development Strategies of Georgia have further affirmed multiple issues relevant for the Agenda 2030; three goals set for 2021-2027 are also topical for Sustainable Farming Standards:



Georgia also specifically focuses its actions on hazelnut development, as it is obvious that hazelnut has great potential in Georgia, and increasing global demand allows Georgia to reap strong economic benefits from the sector and take leading positions worldwide. However, as mentioned above, a low quality of the product and malicious operations by some business actors have drastically damaged the reputation of Georgian hazelnuts, resulting in low prices. This was one of the reasons why Georgia decided to strengthen regulations of both the production and export of hazelnuts.[135]

The Georgian government has set the goal of bolstering the reputation of Georgian hazelnuts through supporting sustainable approaches, which helps improve the quality of the product, the integrity of the sector and the trust of foreign buyers. The Sustainable Farming Standards have the potential to give Georgian hazelnuts specific characterization, which would ensure it regains its global market position.

[134] More information about the targets and respective indicators is available on a specialized platform sdg.gov.ge, while information on the implementation of SDGs by Georgia can be found in Voluntary National Review of Georgia - VNR 2020, available here: https://sustainabledevelopment.un.org/content/documents/26389VNR_2020_Georgia_Report.pdf

[135] Source: interview with the Minister of Environmental Protection and Agriculture of Georgia, Mr. Levan Davitashvili, March 30, 2021.

There are multiple State programs which support farmers in certain activities. One of them was focused on **cooperative hazelnut farming development**. Namely, Government Ordinance N252 (June 4, 2015) introduced a program aiming to create preconditions for hazelnut production, processing, and sales; decreasing cost of hazelnut production; increasing qualitative and quantitative outcomes; develop export potential, raise entrepreneurial culture of the population through engaging them in agricultural cooperation and improving rural social-economic conditions. The program was aimed at Zugdidi Municipality.

This program provided following possibilities:

- Transferring land plots for main executors of the program – approximately 1 ha land, which is suitable for respective activities based on physical and landscape conditions
- Supporting the creation of production infrastructure on above mentioned land plot, which should have included (infrastructure was given to the executor of the program in lease for 5 years, after successful execution of the program, these can be transferred into ownership through purchase):
    - Construction for drying and storage facilities
    - Possibility of drying and storing (for drying) at least 24 tons of hazelnut
    - Possibility of storing at least 500 tons of hazelnut (after drying)
    - Focus on infrastructure requiring no major changes for establishing HACCP standards
- Program executors should have ensured consultative services for international standards establishing (Global GAP)
- Properties could be privatized to the cooperatives which had established Global GAP and met the criteria set by the ordinance (such as, being registered as business operator and involved in hazelnut farming, have no outstanding tax duties, include at least 500 members, with at least 31% women, young people (age 18-35), or other vulnerable groups (socially vulnerable, internally displaced, victims of natural disasters, inhabitants of conflict zone bordering areas, etc.), and so on.
- Program participants were supposed to ensure all hazelnut farmers whose harvest was supposed to be processed had established best international practices (by 2018) and the infrastructure was in conformity with food safety norms (by 2019).

Although this program is no longer active (cannot receive new claims), it underlines the relevance of cooperation in hazelnut farming and the readiness of the government to support such cooperation provided international standards (HACCP, Global GAP) are followed and prioritized.

Currently there are several ongoing programs which are significant for hazelnut:

"Plant the Future" is a program that supports cultivating perennial crops, aimed at replacing imported products and increasing export, through ensuring that food safety and hygiene rules are followed. The program includes four co-funding components – for perennial crop gardens, for nurseries, for counter-hail, well/borehole/pump and drip irrigation systems, and restoring plants damaged by natural catastrophes.[136] The program provides financial, educational, and technical support in these components. Hazelnut farmers have made use of co-funding for their irrigation systems and boreholes, at the same time, the program prioritizes co-funding of the cultivation of hazelnuts in almost all regions of Georgia (except Samtskhe-Javakheti) and provides funds for purchasing a crop (GEL 1.75 for crop purchased in Georgia, GEL 1.68 for imported from EU, UK or USA, GEL 1.89 for imported from elsewhere for individuals or legal entities; however, co-funding is higher for cooperatives – GEL 2, GEL 1.92 and GEL 2.16 respectively for Georgian, EU/UK/USA imported and globally imported crops). This co-funding is issued provided at least 500 crops are intensively planted on 1 ha. As for replacing damaged crops, the program allows purchase of hazelnut as well. The farmers requesting support through this program should ensure they are registered within the registry established as a result of farm/farmers registration program and the crops they purchase are approved by the Agriculture Research Center.[137]

The state also supports agricultural insurance – the program **Agro-Insurance** has been in place since 2016, providing co-funding for insuring various crops, including hazelnuts (state co-funds 70% within a set limit of GEL 6,000 per ha).[138]

Other state programs support processing and storage facilities, agro-diesel support program, harvesting machinery co-financing, etc. These programs are regularly updated, and details can be retrieved from the portal of Rural Development Agency of Georgia: **rda.gov.ge**.

[136] Details available here: http://rda.gov.ge/projects/read/plant_future/2:parent

[137] Program Approved by the Ordinance N56 of the Government of Georgia dated February 12, 2015.

[138] Ordinance N648 of the Government of Georgia dated March 31, 2017. More information available at: http://rda.gov.ge/projects/read/agroinsurance/4:parent

5

INTERNATIONAL SUSTAINABLE FARMING STANDARDS

This section does not provide an exhaustive list of the standards and certifications that are relevant to hazelnut farming. Below are provided a few key examples of what voluntary standards and certification can entail and what they offer.

The common feature of these standards is that they are all internationally well recognized and offer a comprehensive assessment of production and supply chain processes against their standards. These standards often include common core themes such as environmental, social and governance aspects of farming, and involve a rigorous knowledge-sharing as well as assistance for the farmers who desire to get certified. Certification processes often involve audits to ensure that production or supply chain practices comply with the standard requirements. However, as a result of these elaborate processes and expenses, the standard-setting organizations offer to increase farmers' production effectiveness, safety and quality, lower expenses, and, as a result, improved reputation, including through the standard label. Additionally, for individual farmers this would result in better prices from lower input cost (more efficient production), higher productivity and better market opportunities, and fewer recalls or rejected product. From a broader perspective, standardization also entails harmonization, easier audit processes for government bodies and improved international trade for the product in question. These voluntary standards offer Georgian hazelnut suppliers the opportunity to distinguish themselves on the international markets.

These sustainability standards differ from each other by their focus, preferred mechanisms and processes and the scope of their requirements. Some require a high standard of sustainability, while others act as a bottleneck of food safety and hygiene and can be seen as the basic standard for export markets. Voluntary standards have a commercial value depending on the end market and buyer and may add a value margin for producers. It is important to note that these standards are management systems and help producers to better manage their production and systems.

ISO

ISO is an independent, non-governmental international organization with a membership of 165 national standards bodies. ISO represents the biggest standard-setting organization in the world with 23,764 standards and 794 technical committees and subcommittees and covers a wide range of sectors and spheres.[139]

By 2017, ISO had produced more than 1,000 standards related to agriculture and these covered areas of fertilizers and agrochemicals, agricultural machinery and irrigation systems, environmental impact, protective clothing and food products and safety.[140]

ISO 22000 ON FOOD SAFETY MANAGEMENT

- Sets out requirements for a food safety management system, maps out what an organization needs to do to demonstrate its ability to control food safety hazards to ensure that food is safe.

27065 PROTECTIVE CLOTHING

- Performance requirements for protective clothing worn by operators applying liquid pesticides.

ISO 14055 ENVIRONMENTAL MANAGEMENT

- Guidelines for establishing good practices for combatting land degradation and desertification.

ISO 22005 TRACEABILITY IN THE FEED AND FOOD CHAIN

- General principles and basic requirements for system design and implementation.

[139] Available at: https://www.iso.org/about-us.html accessed on 25/04/2021.

[140] ISO and agriculture, available here: https://www.iso.org/files/live/sites/isoorg/files/store/en/PUB100412.pdf

SAN - SUSTAINABLE AGRICULTURE FRAMEWORK 2021

The Sustainable Agriculture Network (SAN) is an international network of NGOs focused on aiding actors in the agricultural sector to improve their sustainability performance. SAN provides agricultural solutions to pressing environmental and social problems.[141]

It has developed a Sustainable Agriculture Framework for 2021, which is a tool that facilitates a combination of elements of verification and support through a modular and outcome-based approach.[142] The framework is structured around impact areas and sustainability goals.

RAINFOREST ALLIANCE

The Rainforest Alliance (member of SAN) is an international non-profit organization working at the intersection of **business**, **agriculture**, and **forests** to promote responsible business practices. It focuses on forests, livelihoods, climate, and human rights in different areas of the private sector, including agriculture.[143] The Rainforest Alliance standard is well-recognized on the global market and recently it merged with the UTZ standard that offers a specialized standard for hazelnuts. Therefore, it is highly relevant to hazelnut farming.

These impact areas include sustainable management, biodiversity conservation, crop protection and agrochemicals management, protection of workers' rights, wellbeing of rural communities, climate change, etc.

[141] https://www.sustainableagriculture.eco/

[142] https://static1.squarespace.com/static/59d44f074c0dbfb29da45615/t/603534ac6ab0377cca7882a9/1614099638889/D-Sustainable+Agriculture+Framework+2021-Feb.pdf

[143] See https://www.rainforest-alliance.org/about

The Rainforest Alliance offers a certification programme for its Sustainable Agriculture Standard in two core directions represented by Farm Requirements and Supply Chain Requirements.[144] The former covers agricultural production and provides guidance on problematics areas such as **management, traceability, farming, social** and **environmental**,[145] while the latter applies to value chain activities related to agricultural products and covers the same areas from the supply chain perspective.[146]

RA HAZELNUT STANDARD (FORMERLY UNDER UTZ)

The hazelnut standard is a specialized certification program which was elaborated under UTZ for sustainable farming along with coffee, tea and cocoa standards. Since 2018 UTZ has merged with the Rainforest Alliance and harmonized its standards with the former's Sustainable Agriculture Standard.[147] The UTZ Standard operated on two core sets of guidelines: the **Code of Conduct** which applies to the growing and harvesting process, and the **Chain of Custody** which covers products throughout their supply chain.[148]

The UTZ Certified Code of Conduct focuses on good agricultural practices, including efficiency, productivity and quality, and social and environmental aspects of farming. The standard sets requirements based on four core pillars: **Farm Management, Farming Practices, Social and Living Conditions and Environment**. These pillars include various tools and systems that help implement the Code of Conduct such as record keeping, including of volumes in the UTZ Certified traceability system, integrated pest management, application of national laws and ILO conventions, etc.[149] UTZ has also developed a list of banned pesticides.[150]

The UTZ Chain of Custody is a set of rules designed to ensure that the product originates from or relates to an UTZ certified source. This is maintained through UTZ's traceability system which differs according to the type of product.[151] In case of hazelnuts, UTZ employs the MultiTrace traceability program.[152]

The UTZ Standard is a distinguished program as it offers a certification program in the hazelnut sector. Over 6,800 hazelnut farmers apply the UTZ standards to sustainable farming and it works with large retailers such as Migros/Delica, Natra, Rewe Group and Jumbo Supermarkets. UTZ further

[144] See Farm Requirements here: https://www.rainforest-alliance.org/business/resource-item/2020-sustainable-agriculture-standard-farm-requirements/ and Supply Chain requirements here: https://www.rainforest-alliance.org/business/resource-item/2020-sustainable-agriculture-standard-supply-chain-requirements/

[145] See https://www.rainforest-alliance.org/business/wp-content/uploads/2020/06/2020-Sustainable-Agriculture-Standard_Farm-Requirements_Rainforest-Alliance.pdf

[146] https://www.rainforest-alliance.org/business/wp-content/uploads/2020/06/Rainforest-Alliance-2020-Sustainable-Agriculture-Standard_Supply-Chain-Requirements.pdf

[147] https://utz.org/who-we-are/about-utz/

[148] https://utz.org/what-we-offer/certification/the-standard/

[149] https://s37336.pcdn.co/wp-content/uploads/2015/12/EN_UTZ_Core-Code-Individual-v1.1_2015.pdf paras. 14-16

[150] https://s37336.pcdn.co/wp-content/uploads/2015/12/EN_UTZ_List-of-Banned-PesticidesWatchlist_v1.0_2015.pdf

[151] https://utz.org/what-we-offer/certification/the-standard/

[152] https://utz.org/better-business-hub/sourcing-sustainable-products/multitrace-making-the-traceability-of-certified-supply-chains-future-proof/

works on prevention and elimination of child labor in the hazelnut sector.[153] UTZ has developed a specific Hazelnut Module that is supposed to be applied together with the Code of Conduct by hazelnut farmers. The Hazelnut Module adds supplementary control points to existing pillars of the Code. These control points include, for example, removal of livestock from orchards, provision of workers with personal protective equipment, direct payment of wages to workers, treatment of worker's children, non-discrimination of migrant workers.[154]

The process of certification involves an independent body which provides a certificate that a product, service or system meets specific requirements against the Code and/or Chain of Custody requirements. This requires receiving an audit from an UTZ approved certification body. The Code of Conduct certificate is valid for one year, whereas the Chain of Custody certificate can be valid from a year to more than three years.[155]

FAIRTRADE

Fairtrade International is a globally recognized certification programme for producers and businesses which meet its standards. The standards encompass four dimensions: social development, economic development, environmental protection and prohibition of forced and child labour. The standards distinguish between core requirements, that are mandatory to meet to get certified, and development requirements that encourage continuous improvement.[156]

The key objectives of the Fairtrade Standards are to:

- ensure that producers receive prices that cover their average costs of sustainable production
- provide an additional Fairtrade Premium which can be invested in projects that enhance social, economic, and environmental development
- enable pre-financing for producers who require it
- facilitate long-term trading partnerships and enable greater producer control over the trading process
- set clear core and development criteria to ensure that the conditions of production and trade of all Fairtrade certified products are both socially and economically fair as well as environmentally responsible

153 https://utz.org/what-we-offer/certification/products-we-certify/hazelnut/
154 https://s37336.pcdn.co/wp-content/uploads/2016/02/EN-UTZ-Code-of-Conduct-Hazelnut-Module-1.0-2015.pdf
155 https://s37336.pcdn.co/wp-content/uploads/2015/12/EN_UTZ_Certification-Protocol_v4.1_2015.pdf paras.9-15
156 https://www.fairtrade.net/standard

Standards:

The Fairtrade Standard for Small-scale Producer Organizations (SPO) applies to small-scale farming organizations that supply Fairtrade products. Principles underlying the standard include mandatory requirement for members to be small-scale producers, democracy and enabling strong producer organizations.[157] The standard requirements are divided into four categories such as General Requirements, Trade, Production and Business and Development. General requirements determine certification and define the scope of the standard. Trade covers the issues related to traceability, sourcing, contracts and the use of Fairtrade Marks. Production requirements encompass management of production practices, environmental management, and labour conditions. Finally, Business and Development cover the topics of development potential, democracy participation and transparency, and non-discrimination.[158] The SPO Standard also provides for specifications for various products including nuts. **Fairtrade SPO Standard for Nuts** adds certain requirements that are specific to nut production and trade such as, for instance, protective garments and oils for workers of producers of cashew nuts.[159] However, this standard does not specifically mention hazelnuts and has not been tailored to the specificities of hazelnut farming.

The Fairtrade Standard for Hired Labour applies to organizations which employ hired labour to supply Fairtrade certified products. It includes General Requirements, Social Development, Labour Conditions, Environmental Development and Trade chapters and aims to ensure fair working conditions, decent wages, the right to join trade unions for workers.[160]

The Fairtrade Trader Standard applies to traders who buy and sell Fairtrade products, and/or handle the Fairtrade price and premium. This standard is structured similarly to the SPO standard, but includes additional advanced requirements such as further detailed requirements for traceability (including documentary, physical traceability, and mass balance), trading with integrity, sharing risks, access to finance, etc.[161]

Fairtrade has also established the Contract Production standard (including specifications for nuts) which applies to small-scale producers who are not yet democratically organized[162] and the Climate Standard.[163]

157 https://www.fairtrade.net/standard/spo
158 https://files.fairtrade.net/standards/SPO_EN.pdf
159 https://files.fairtrade.net/standards/Nuts_SPO_EN.pdf
160 https://www.fairtrade.net/standard/hl
161 https://files.fairtrade.net/standards/TS_EN.pdf
162 https://www.fairtrade.net/standard/cp
163 https://www.fairtrade.net/standard/climate

GFSI RECOGNIZED STANDARDS

The Global Food Safety Initiative (GFSI) is a Coalition of Action from The Consumer Goods Forum (CGF), bringing together 34 retailers and manufacturers. GFSI provides certification (recognition) for certification programme owners (CPOs) once they verify that they meet the Benchmarking Requirements, one of the world's most widely accepted benchmark documents for food safety programmes.[164] GFSI has recognized several standards that are relevant for hazelnut farming such as, for instance, Freshcare,[165] CanadaGAP,[166] PrimusGFS,[167] SQF Institute standard,[168] BRCGS and GlobalG.A.P. As GFSI strives towards harmonisation of these standards, they operate on similar foundational principles. The below text reviews the latter two:

BRCGS

BRCGS was founded in 1996 by retailers who wanted to harmonise food safety standards across the supply chain and today represents a globally recognised third-party certification scheme for food safety, ethical trade, storage and distribution and packaging materials.[169]

Standards:

The Global Standard for Food Safety - provides a framework to manage product safety, integrity, legality and quality, and the operational controls for these criteria in the food and food ingredient manufacturing, processing, and packing industry. Issue 8 of the standard incorporates nine sections: senior management commitment, the food safety plan – HACCP, food safety and quality management system, site standards, product control, process control, personnel, high-risk, high-care and ambient high-care production risk zones, requirements for traded products.

The Global Standard for Storage and Distribution - ensures the quality and safety of products during their storage and distribution throughout the supply chain. The standard is specifically designed for logistics operations dealing with food, packaging, and consumer products.

Ethical Trade and Responsible Sourcing – includes the Global Standard for Ethical Trade & Responsible Sourcing and Risk Assessment. The former is a full social compliance standard and is designed to allow an assessment of a company's premises, operational systems, and procedures by the certification body against the requirements of the standard and in accordance with global best practice for social/ethical audits. The latter provides an assessment of ethical trade & responsible sourcing performance against the 5 Vital Signs that are drawn from the Global Standard.

[164] Read more on GFSI recognition here: https://mygfsi.com/how-to-implement/recognition/
[165] https://www.freshcare.com.au/standards/
[166] https://www.canadagap.ca/
[167] http://primusgfs.com/
[168] https://www.sqfi.com/
[169] BRCGS webpage, available here: https://www.brcgs.com/about-brcgs/;

GLOBALG.A.P.

GLOBALG.A.P. is the internationally recognized standard for farm production. It promotes good agricultural production to benefit farmers, retailers, and consumers throughout the world. GLOBALG.A.P. standards cover the minimum requirements for agriculture and, hence, represent the basic minimum or sustainable farming.

Standards:

GLOBALG.A.P. Integrated Farm Assurance Standard (IFA) is the core standard and covers Good Agricultural Practices and additional aspects of the food production and supply chain.[170] The IFA Standard consists of General Rules and Control Points and Compliance Criteria (CPCC) and, as a modular system, consists of the All Farm Base, Scope and Sub-scope Modules. In this system, hazelnuts would be subject to All Farm Base, Crop (Scope) and Fruit & Vegetables (Sub-scope) Standard requirements.[171]

The GLOBALG.A.P. Fruit & Vegetables Standard has been recognised by GFSI and covers all stages of production, from pre-harvest activities such as soil management and plant protection product application to post-harvest produce handling, packing and storing.[172]

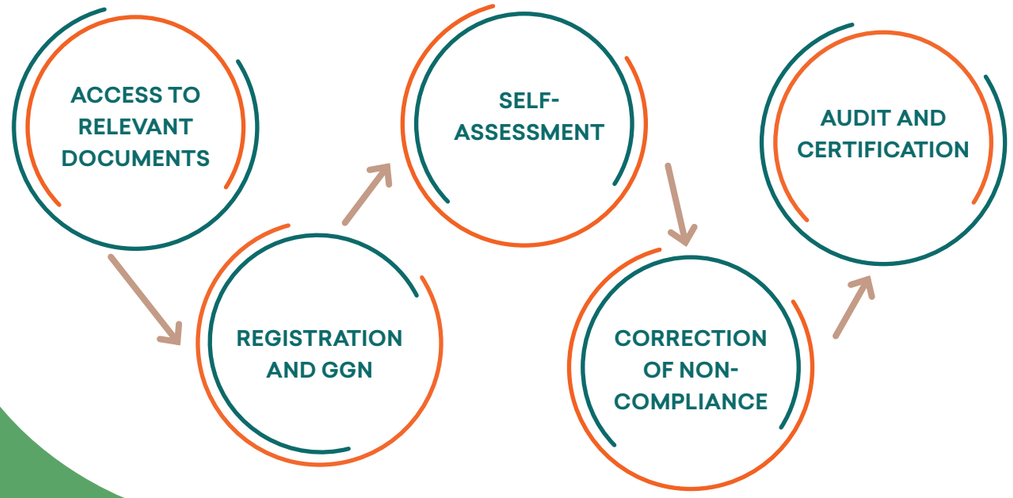
GLOBALG.A.P. certification covers food safety and traceability, environment (including biodiversity), workers' health, safety and welfare, and animal welfare. It includes tools such as Integrated Crop Management (ICM), Integrated Pest Control (IPC), Quality Management System (QMS), and Hazard Analysis and Critical Control Points (HACCP).

[170] https://www.globalgap.org/uk_en/for-producers/globalg.a.p./integrated-farm-assurance-ifa/index.html
[171] https://www.globalgap.org/uk_en/for-producers/globalg.a.p./integrated-farm-assurance-ifa/index.html
[172] https://www.globalgap.org/.content/.galleries/documents/190201_GG_IFA_CPCC_FV_V5_2_en.pdf

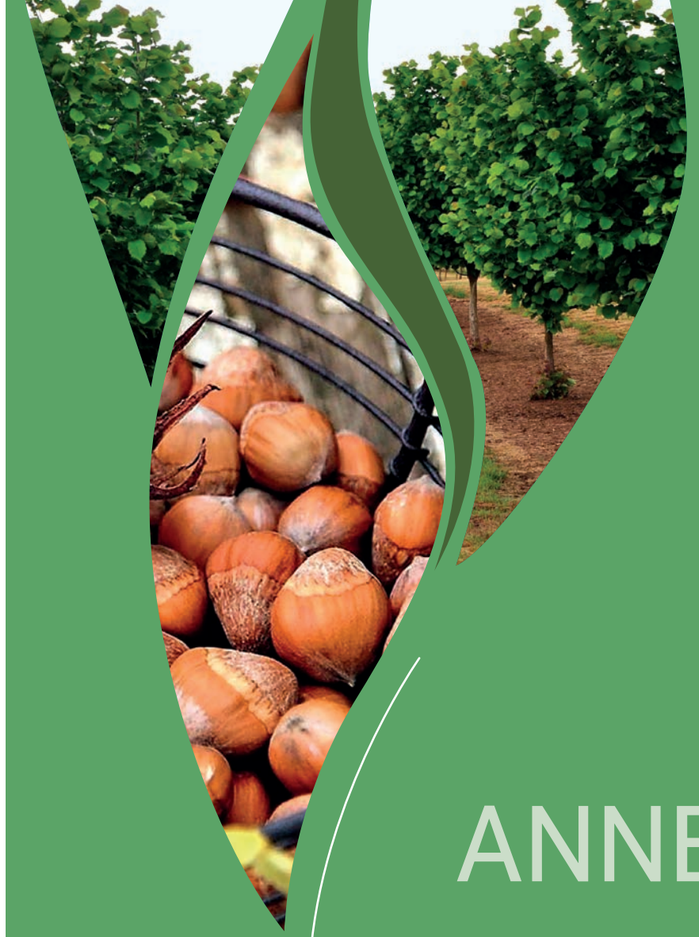
The GLOBALG.A.P. Chain of Custody Standard (CoC) applies to certified products throughout the value chain and ensures that any product bearing a GLOBALG.A.P. label or sold as a GLOBALG.A.P. certified product is sourced from GLOBALG.A.P. certified farms. Therefore, this standard applies to the processes throughout the supply chain, not the certification of any product or the company itself.

GLOBALG.A.P. also offers an add-on, which establish stronger quality standards in specific aspects of agricultural production and the supply chain.[173] Examples of these add-ons include GLOBALG.A.P. Risk Assessment on Social Practice (GRASP) standard which sets sustainability requirements specifically for social practices on the farm, such as specific aspects of workers' health, safety, and welfare.[174] Under the GRASP standard, GLOBALG.A.P. has produced a National Interpretation Guideline (NIG) for Georgia which specifies labour, human rights and social requirements in the Georgian context.[175]

The certification process starts with the self-assessment by producers based on the relevant GLOBALG.A.P. Standard documents and checklists. On the next step, producers register with one of the approved certification bodies and get the GLOBALG.A.P. Number (GGN). Before the assessment happens, producers are supposed to go through the relevant checklist and correct the points they do not comply with. This process can be aided by a GLOBALG.A.P. licensed Farm Assurer, who is a trained and approved independent consultant. After complying with the relevant conditions, producers' farms are assessed by the selected certification body and, if assessed positively, get the standard certificate which is valid for one year.[176]



[173] https://www.globalgap.org/uk_en/for-producers/globalg.a.p.-add-on/
[174] https://www.globalgap.org/uk_en/for-producers/globalg.a.p.-add-on/grasp/what-is-GRASP/#
[175] https://www.globalgap.org/.content/.galleries/documents/210201_GRASP-Interpretation_GL_V1_3-1-i_Georgia_en.pdf
[176] https://www.globalgap.org/uk_en/what-we-do/globalg.a.p.-certification/five-steps-to-get-certified/



ANNEXES

1 ANNEX

SUSTAINABLE FARMING STANDARDS SHEET

SUSTAINABLE HAZELNUT FARMING PRINCIPLES AND RESPECTIVE ACTIONS

PRINCIPLE 1.
IMPLEMENT RESPONSIBLE AGRICULTURE PRACTICES

ACTION 1. Use agrochemicals responsibly and with the least damage to nature and health

ACTION 2. Exclude GMO or GMO-based practices

ACTION 3. Preserve biodiversity

ACTION 4. Maintain farm through ustainable approaches

ACTION 5. Protect soil, water, and air

ACTION 6. Strive to abide by organic farming principles set down by law and international standards

PRINCIPLE 2.
USE RESOURCES IN AN ENVIRONMENT-FRIENDLY MANNER

ACTION 7. Encourage and strive for environmentally friendly technologies

ACTION 8. Ensure sustainable waste management

ACTION 9. Manage land sustainably

PRINCIPLE 3.
SAFEGUARD CONSUMER RIGHTS

ACTION 10. Prioritize Food Safety

ACTION 11. Ensure Responsible Marketing

PRINCIPLE 4.
ENABLE TRACEABILITY

ACTION 12. Maintain necessary records

ACTION 13. Find and participate in available traceability programs

PRINCIPLE 5.
DO BUSINESS WITH INTEGRITY

ACTION 14. Take action to increase the reputation of Georgian hazelnuts locally and globally

ACTION 15. Say no to all forms of corruption

ACTION 16. Compete with integrity

ACTION 17. Pay your taxes

ACTION 18. Strive towards better standards and advocate with fellows

PRINCIPLE 6.
PROVIDE DECENT WORKING CONDITIONS

ACTION 19. Safeguard the health, wellbeing and safety of employees

ACTION 20. Eliminate all forms of forced and compulsory labor

ACTION 21. Abolish child labor

ACTION 22. Eliminate all forms of discrimination and workplace harassment and violence in employment

ACTION 23. Respect the right of association and collective bargaining

PRINCIPLE 7.
ASSESS, PREVENT AND ADDRESS HUMAN RIGHTS VIOLATIONS

ACTION 24. Assess any impact on other human rights and take action

ACTION 25. Redress all impacts

PRINCIPLE 8.
EMPOWER YOUR COMMUNITY

ACTION 26. Empower through employment and respect local culture

ACTION 27. Contribute to efforts aimed at poverty reduction in the community

ACTION 28. Take part in knowledge-sharing

2 ANNEX

ADDITIONAL REFERENCES

List of literature, web-resources and practical tools which can inform the implementation process further

GENERAL REFERENCES:

- Sustainable Development and Agriculture:
- UN Global Compact Georgia, Sustainable Development Goals (SDGs), http://globalcompact.ge/mdgradi-ganvitarebis-miznebi/
- UN Sustainable Development, why SDGs matter, https://www.un.org/sustainabledevelopment/why-the-sdgs-matter/

MAIN INTERNATIONAL FRAMEWORKS:

- The UN guiding principles on business and human rights (UNGPs), https://www.ohchr.org/documents/publications/guidingprinciplesbusinesshr_en.pdf
- OECD Guidelines for multinational enterprises https://www.oecd.org/corporate/mne/
- FAO - SAFA Guidelines available at: http://www.fao.org/3/i3957e/i3957e.pdf;
- Codex Alimentarius - http://www.fao.org/fao-who-codexalimentarius/about-codex/en/#c453333;
- ILO Conventions - https://www.ilo.org/global/standards/introduction-to-international-labour-standards/conventions-and-recommendations/lang--en/index.htm
- Convention on the Rights of the Child https://www.ohchr.org/en/professionalinterest/pages/crc.aspx
- International Covenant on Economic, Social and Cultural Rights, https://www.ohchr.org/documents/professionalinterest/cescr.pdf
- EU standards:
  - ✓ Common Agricultural Policy;
  - ✓ Green Deal;
  - ✓ From Farm to Fork;
  - ✓ Food safety

PRINCIPLE 1. IMPLEMENT RESPONSIBLE AGRICULTURE PRACTICES

- FarmingFirst, Agriculture and the Sustainable Development Goals: https://www.youtube.com/watch?v=krubffiCYoY
- UC DAVIS Sustainable Agriculture Research & Education Program – What is Sustainable Agriculture: https://sarep.ucdavis.edu/sustainable-ag
- National Institute of Food and Agriculture United States Department of Agriculture - Sustainable Agriculture: https://nifa.usda.gov/topic/sustainable-agriculture
- Union of Concerned Scientists - What is Sustainable Agriculture? https://www.ucsusa.org/resources/what-sustainable-agriculture
- European Commission - Sustainable agriculture in the EU: https://ec.europa.eu/info/food-farming-fisheries/sustainability_en
- Food and Agriculture Organization (FAO) - Sustainable Food and Agriculture: http://www.fao.org/sustainability/en/
- United States Department of Agriculture (USDA) Agricultural Research Service Food Data Central profile for hazelnuts or filberts: https://fdc.nal.usda.gov/fdc-app.html#/food-details/1100524/nutrients
- Sh. Tkeshelashvili, Georgia received 107mln USD from exports to the European Union – what are we selling to EU? https://bm.ge/ka/article/2-tveshi-saqartvelom-evrokavshirshi-eqsportit-107-milioni-miigo---ras-vyidit-eu-shi/78482/
- The Ministry of Environmental Protection and Agriculture https://mepa.gov.ge/Ge/News/Details/20150
- Codes of practice on:
  - ✓ Tree Nut Hygiene;
  - ✓ Aflatoxins in Tree nuts;
  - ✓ Pesticides for Hazelnuts.
- UNECE – DDP Standards; Illustrated: guidelines prepared together with OECD on Hazelnuts;
- Buyers' standards – Ferrero Sustainability; Nestle sustainability; Olam sustainability in hazelnuts; Nutella sustainability;
- Rainforest Alliance Sustainable Agriculture Standard, Farm Requirements, Version 1.1. 2020: https://www.rainforest-alliance.org/business/wp-content/uploads/2020/06/2020-Sustainable-Agriculture-Standard_Farm-Requirements_Rainforest-Alliance.pdf
- Global G.A.P.: https://www.globalgap.org/uk_en/for-producers/
- Good Agricultural Practices Plain Language Guide, United States Department of Agriculture, 2012: https://nesfp.nutrition.tufts.edu/sites/default/files/resources/plain_language_guide_to_gaps-small.pdf

- FAO Fertilizer Training Aid Module, 2020: http://www.fao.org/3/ca7496en/ca7496en.pdf
- Rodríguez-Eugenio, N., McLaughlin, M. and Pennock, D. 2018. Soil Pollution: a hidden reality. Rome, FAO: http://www.fao.org/3/i9183en/i9183en.pdf
- Mateo-Sagasta, J. (IWMI), Zadeh S.M. (FAO) and Turral H. 2019. Water pollution from agriculture: a global review, FAO, IWMI: http://www.fao.org/3/i7754e/i7754e.pdf
- United States Department of Agriculture, Introduction to Organic Practices, 2015: https://www.ams.usda.gov/sites/default/files/media/Organic%20Practices%20Factsheet.pdf
- USDA Organic Farming Regulations Guidebook, Is Organic Farming an Option for me? USDA, 2015: https://www.ams.usda.gov/sites/default/files/media/IsOrganicAnOptionforMe.pdf
- Green Farming Guideline interactive portal: https://www.greenhornsguidebook.org/
- გოდერძიშვილი, გ., რეხვიაშვილი, ლ., თხილის წარმოების ტექნოლოგია, 2017, EU, ADA, CARE: http://www.care.org.ge/uploads/Hazelnut.pdf
- ავტორთა კოლექტივი, თხილი: საუკეთესო პრაქტიკა, თხილის ბაღის გაშენება-მოვლა და პირველადი გადამუშავება. UNDGP Georgia, 2016: https://gfa.org.ge/wp-content/uploads/2018/11/თხილი.pdf

PRINCIPLE 2.
SAFEGUARD CONSUMER RIGHTS

- NFA of Georgia http://nfa.gov.ge/Ge/
- WHO, Mycotoxins https://www.who.int/news-room/fact-sheets/detail/mycotoxins#:~:text=Aflatoxins%20have%20also%20been%20shown,a%20common%20food%2Dcontaminating%20mycotoxin.
- FAO, Food Quality and Safety http://www.fao.org/food-safety/en/
- GLOBALG.A.P. Produce Safety Assurance Standard https://www.globalgap.org/uk_en/for-producers/globalg.a.p./psa/

PRINCIPLE 3.
SAFEGUARD CONSUMER RIGHTS

- NFA of Georgia http://nfa.gov.ge/Ge/
- WHO, Mycotoxins https://www.who.int/news-room/fact-sheets/detail/mycotoxins#:~:text=Aflatoxins%20have%20also%20been%20shown,a%20common%20food%2Dcontaminating%20mycotoxin.
- FAO, Food Quality and Safety http://www.fao.org/food-safety/en/
- GLOBALG.A.P. Produce Safety Assurance Standard https://www.globalgap.org/uk_en/for-producers/globalg.a.p./psa/

PRINCIPLE 4.
ENABLE TRACEABILITY

- FAO, Food Traceability Guidance, http://www.fao.org/3/i7665en/I7665EN.pdf
- EU, Food Traceability Factsheet, https://ec.europa.eu/food/system/files/2016-10/gfl_req_factsheet_traceability_2007_en.pdf
- Technical Regulation on Informing the Consumers regarding the Food, approved by the Government of Georgia Ordinance N301, of July 1, 2016, available in Georgian here: https://matsne.gov.ge/ka/document/view/3328780
- Technical Regulation approved by the Ordinance of Government of Georgia N548, of November 16, 2018, available here: https://matsne.gov.ge/ka/document/view/4367791

PRINCIPLE 5.
DO BUSINESS WITH INTEGRITY

- Principle 10, Anti-Corruption, UN Global Compact: https://www.unglobalcompact.org/what-is-gc/our-work/governance/anti-corruption
- Georgian law on Competition: www.matsne.gov.ge/en/document/view/1659450
- Tax Code of Georgia: https://matsne.gov.ge/en/document/view/1043717

PRINCIPLE 6.
PROVIDE DECENT WORKING CONDITIONS

- ILO Conventions - https://www.ilo.org/global/standards/introduction-to-international-labour-standards/conventions-and-recommendations/lang--en/index.htm
- სოციალური სამართლიანობის ცენტრი, შრომითი უფლებები, საერთაშორისო სტანდარტებისა და პრაქტიკის მიმოხილვა, https://socialjustice.org.ge/ka/products/shromiti-uflebebi-saertashoriso-standartebisa-da-praktikis-mimokhilva
- Sustainable Agriculture Network, Protection of Workers' Rights, https://www.sustainableagriculture.eco/protection-of-workers-rights
- BBC News, Is Nutella made with nuts picked by children? https://www.bbc.com/news/stories-49741675
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- Food and Agriculture Organization of the UN, Policy Support and Governance Gateway, Gender, http://www.fao.org/policy-support/policy-themes/gender/en/
- UTZ Guidance Document, Gender Equality and Women's Empowerment https://s37336.pcdn.co/wp-content/uploads/2018/05/Guidance-document-%E2%80%93-Gender-and-Women%E2%80%99s-empowerment.pdf

PRINCIPLE 7.
ASSESS, PREVENT AND ADDRESS HUMAN RIGHTS VIOLATIONS

- The UN guiding principles on business and human rights (UNGPs), https://www.ohchr.org/documents/publications/guidingprinciplesbusinesshr_en.pdf
- OECD Guidelines for multinational enterprises https://www.oecd.org/corporate/mne/
- International Covenant on Economic, Social and Cultural Rights, https://www.ohchr.org/documents/professionalinterest/cescr.pdf
- Buyers' standards - Ferrero Sustainability; Nestle sustainability; Olam sustainability in hazelnuts; Nutella sustainability;

PRINCIPLE 8.
EMPOWER YOUR COMMUNITY

- Gilbert F., Cooperative Farming. Frameworks for Farming Together, Northeast Sustainable Agriculture Research and Education, 2018: https://greenhorns.org/wp-content/uploads/2018/07/Greenhorns_Cooperative_Farming_Guidebook.pdf
- World Bank, Agriculture and Food, - https://www.worldbank.org/en/topic/agriculture/overview
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SUSTAINABLE FARMING STANDARDS

SUSTAINABLE FARMING PRINCIPLES

- PRINCIPLE 1 — IMPLEMENT RESPONSIBLE AGRICULTURAL PRACTICES
- PRINCIPLE 2 — USE RESOURCES IN AN ENVIRONMENT-FRIENDLY MANNER
- PRINCIPLE 3 — SAFEGUARD CONSUMER RIGHTS
- PRINCIPLE 4 — ENABLE TRACEABILITY
- PRINCIPLE 5 — DO BUSINESS WITH INTEGRITY
- PRINCIPLE 6 — PROVIDE DECENT WORKING CONDITIONS
- PRINCIPLE 7 — ASSESS, PREVENT AND ADDRESS HUMAN RIGHTS VIOLATIONS
- PRINCIPLE 8 — EMPOWER YOUR COMMUNITY

Guideline for Hazelnut Growers in Georgia