

### About these Guidelines

By adhering to these guidelines, pickers can improve both the quality and profitability of their harvests while minimizing environmental impacts. The focus on flexible, informed practices which ideally includes record keeping, adds to the living knowledge of pickers and buyers, ensuring that wild botanicals are harvested in a manner that supports local livelihoods and maintains ecosystem health. Embracing these practices will enable the wild botanical industry to thrive sustainably, meeting the demands of both the market and the environment in a balanced and responsible way.

These guidelines have been collated from internationally recognized best practice standards. See Bibliography on p 18

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#### Glossary

This section provides clear definitions of essential terms related to harvesting and plant care, offering a comprehensive understanding of the concepts and tools necessary for sustainable and effective practices.

Adaptive Scheduling: Adjusting harvesting times based on weather and plant responses to optimize yield and quality. Aromatic Properties: The fragrance of plant parts, such as flowers and leaves, used in products like perfumes and culinary dishes.

**Breathable Materials**: For example, containers made from natural materials that allow air circulation, reducing the risk of spoilage and preserving quality.

**Climate-Smart Harvesting**: Adjusting harvesting practices to account for weather patterns and climate conditions to ensure quality and minimize environmental impact.

**Collection Limits**: The maximum percentage of a plant that can be harvested without negatively impacting its population and ecosystem.

**Commercial Value**: The economic worth of plant parts, influenced by factors like quality and market demand.

**Continuous Learning**: Keeping updated on best practices and sharing knowledge to improve harvesting techniques and sustainability.

**Caucascert**: Caucascert certifies organic products in Georgia and has been accredited for certification of organic products originating from Georgia and intended for export to the EU.

**Caucascert Organic Production Standard**: Standards based on FairWild and CENN guidelines that set limits on wild harvesting to promote ecological sustainability.

**Disease Management**: Strategies to prevent and control plant diseases, including proper tool hygiene and using resilient plant varieties.

**Dormancy**: A period when a plant is not actively growing, often the best time for harvesting roots to ensure high quality.

**Ecosystem Balance**: The state of equilibrium within an ecosystem where plant and animal populations are maintained at levels that support natural processes and functions.

**Ecosystem Health**: The overall condition of an ecosystem, including its ability to support diverse plant and animal life and maintain ecological processes.

**Ecosystem Protection**: Practices aimed at preserving natural habitats and maintaining biodiversity during harvesting activities.

**FairWild Standards**: Guidelines that ensure wild harvesting practices are sustainable and support conservation efforts, including principles for conservation support and positive impact.

**Management Plans**: Strategies and guidelines developed to ensure that harvesting practices comply with sustainability standards and achieve conservation goals.

**Minimum Percentage Left Untouched**: The proportion of a plant population that must be left unharvested to ensure continued ecosystem health and natural regeneration.

**Natural Regeneration**: The process by which ecosystems restore themselves through the natural growth and reproduction of plants and animals.

**Over-Harvesting**: Excessive or unsustainable extraction of plant resources that can harm ecosystem balance and hinder natural regeneration.

**Pruning Shears**: Tools used for cutting leaves or stems, ideal for selective harvesting with minimal impact on plant health.

**Selective Harvesting**: The practice of picking only some parts of a plant to maintain its health and quality, promoting sustainable harvesting.

Scissors: General-purpose cutting tools used for harvesting various plant parts, such as flowers or leaves.

Soft-Lined Baskets: Containers with a soft interior used to protect fruit from bruise during collection and transport.

**Sustainable Harvesting**: The practice of collecting natural resources in a way that maintains the health of the ecosystem and ensures that resources are available for future generations.

Tool Hygiene: The practice of keeping harvesting tools clean to prevent the spread of diseases between plants.

Tools: Implements used in harvesting, including pruning shears, floral snips, hand trowels, digging forks, and scissors.

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### Introduction



Wild botanicals in Georgia hold deep cultural, medicinal, and economic value, forming an integral part of rural traditions and the country's diverse ecosystems. As demand for these resources grows, particularly for export, sustainable management becomes increasingly crucial to ensure long-term availability and to protect biodiversity.

Harvested from Georgia's mountains, forests, and agricultural lands, these botanicals provide a vital source of supplementary income for many households, complementing traditional activities such as livestock, potato, and cereal production. The sectors they supply, including food, pharmaceuticals, and cosmetics are expanding rapidly, bringing both opportunities and challenges to local enterprises and rural producers.

This growing demand raises significant concerns, including the need to maintain the ecological integrity of plant populations in picking locations, reduce waste, improve processing and storage, and ensure equitable knowledge transfer to the pickers. To sustain the economic benefits that wild botanicals provide to rural livelihoods it is essential to balance market potential with environmental preservation and adopt sustainable harvesting practices that protect biodiversity and conserve ecosystems.

These guidelines include instructions for responsible harvesting, focusing on sustainable collection limits, climate adaptation, and legal compliance —all to support biodiversity conservation and the long-term viability of wild botanical resources. It also refers to wild botanicals home drying principles for harvesters which are intended to help maintain the integrity and value of their botanicals, ensuring they are suitable for personal use or commercial sale.

Below are the core principles underpinning these guidelines.

Core Principles <sup>1</sup>
Harvesting must ensure long-term population stability. Correctly identify species and respect their conservation status. Collection areas must be legally and sustainably managed.
Prevent ecological harm and support biodiversity. Regularly assess the impact of collection on habitats and adjust practices to maintain ecosystem balance.
Harvest at a rate that allows plant populations to regenerate naturally. Monitor species conservation status and adopt practices to ensure long-term availability.
Avoid damaging non-target species and fragile ecosystems. Implement harvesting techniques that protect biodiversity and ecosystem resilience.

<sup>&</sup>lt;sup>1</sup> Conservation of Collected Species (FairWild Standard); Minimizing Environmental Impact (FairWild Standard); Sustainable Resource Management (ISSC-MAP Standard); Protection of Ecosystems and Habitats (ISSC-MAP Standard)

## Chapter 1 General Picking Rules

Key considerations for sustainable, high-quality harvesting include selecting areas with healthy plant populations, avoiding over-harvesting, and using efficient techniques to minimize environmental impact. It also covers proper handling and packaging to maintain botanical quality, while adhering to seasonal and maturity guidelines to ensure optimal harvesting times. General picking rules are detailed below.

#### Site Selection



Prioritize picking in areas with healthy, abundant populations to ensure sustainability. Picking from areas where plants are thriving in dense, robust and thriving populations supports ongoing plant health and productivity, promoting long-term sustainability, a more sustainable harvest and reduces the risk of depleting any single location.

Avoid over-harvesting by only picking the allowable harvesting percentage. By leaving a viable portion of plants untouched, you help preserve the ecosystem's equilibrium and encourage natural regrowth. This helps maintain ecological balance and supports natural regeneration. (See P12 for allowable percentages)

#### Path Selection and Entry/Exit

**Choose one specific path to enter and exit the picking area**. Using a single route minimizes disturbance to the surrounding vegetation and reduces soil erosion.

**Start picking from the bottom of the slope.** Harvesting from the bottom to the top of a slope helps prevent soil erosion and reduces the risk of plant damage.

#### Harvesting Techniques

**Pick Healthy, High-Quality Plants**. Focus on harvesting only the best specimens, as healthy, high-quality plants are less susceptible to diseases and maximize commercial value, enhancing the overall value and effectiveness of the harvest.

Utilize efficient, minimal-impact methods to reduce plant stress and promote regrowth. Employing gentle techniques minimizes damage to plants and supports



their ability to regrow. E.g. Apply sharp tools to make clean cuts, avoiding unnecessary damage to the plant.

**Gradually, start picking from the outer layers of the plant and move inwards.** Harvesting from the outside in, helps maintain the plant's structure and encourages continued growth.



#### Soil and Weather Considerations

Avoid soil compaction during harvesting. Treading lightly around the plant helps preserve soil structure, which promotes healthy root development and plant growth.

**Do not harvest in wet conditions**. Wet soil is more prone to compaction and damage and wet plants are more prone to damage and disease spread, reducing harvest quality and long-term soil health.

Wear appropriate gear for varying weather conditions. For example, wear sturdy, weatherappropriate clothing, such as waterproof boots for wet conditions and breathable fabrics for hot weather, to prevent discomfort and health risks like hypothermia or heat exhaustion. Sunglasses and sun hats are excellent for mountain areas exposed to the

sun. Gloves can protect hands from thorns, insects, or irritant plants.

Monitor weather patterns and adjust harvesting schedules to avoid extreme conditions. To protect plants and harvested produce to ensure better quality and efficiency.

**Consider plant responses to climate stressors when planning harvests.** For example harvesting in the middle of a very hot day would mean reduced quality and yield, harvesting early morning would reduce the impact of heat on the harvest and plant.

### Handling and Equipment

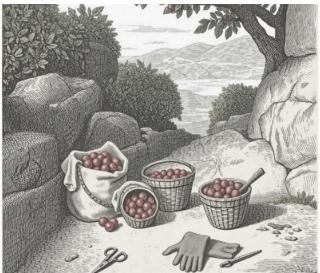
**Clean and Handle Tools Carefully.** Disinfect tools before and after use to prevent the transfer of pathogens and make precise cuts with sharp, clean tools. This reduces the risk of disease spread and minimizes unnecessary damage to the plants, helping maintain their health during harvesting.

**Picked plant materials should not touch the ground.** Keeping plant materials off the ground prevents contamination and maintains their quality.

Avoid using plastic bags or containers as they contribute to heating and spoilage. Plastic traps heat and moisture, leading to spoilage of the plant materials.

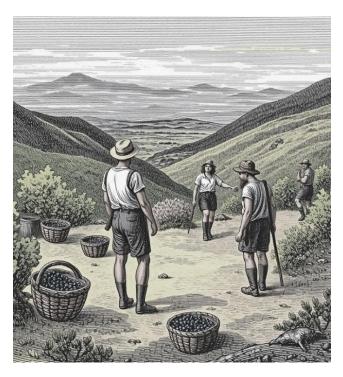
Avoid excessive pressure or compaction of the harvested botanicals. Handling botanicals gently prevents damage and preserves their quality preventing discoloration and degradation of essential qualities.

Use breathable, natural materials for packaging. Breathable materials allow airflow, helping preserve freshness and reduce spoilage.



**Proper Disposal of Diseased Material.** Immediately remove and dispose of any diseased plants away from the picking area to prevent contamination of healthy plants.

#### Environmental Stewardship



Minimize Disturbance to Ecosystems. Being mindful of your surroundings and avoiding damage to surrounding plant life and wildlife helps protect local ecosystems, biodiversity and the long-term health of the harvest area.

Support Local Conservation and Habitat Restoration. Actively participate in and promote habitat restoration and other local conservation efforts where the opportunity arises. By contributing to these initiatives, you help preserve and enhance local environments and inform local attitudes towards them.

Adapt to Climate Change. Stay informed about climate impacts and incorporate climate-smart practices into your harvesting methods. This includes adjusting your harvesting schedules, selecting resilient plant species, and minimizing negative

environmental effects to ensure a sustainable harvest in the face of changing conditions.

**Share Best Practices.** Share ethical knowledge, strategies, and experiences which sustain local botanical resources with other pickers to strengthen collective best practice. Ultimately leading to better collective management of local natural resources.

# Chapter 2 | Picking and Use of Different Plant Parts

This section details the different uses and different picking rules and picking limits for different plant parts.

#### **Uses of Different Plant Parts**

From leaves to seeds, every part of a plant serves specific functions across medicine, cuisine, beauty and wellbeing.

Leaves are used for their medicinal, culinary, and aromatic properties. They are commonly found in herbal remedies, cooking, and teas, providing essential oils and health benefits.
Flowers are valued for their aroma, beauty, and medicinal uses. They are used in perfumes, cosmetics, cooking, and herbal infusions for their fragrance, color, and therapeutic effects.
Roots are important for their medicinal, culinary, and nutritional benefits. They are used in traditional medicine, cooking, and supplements, with the best quality achieved when harvested during dormancy.
Fruits are harvested for their flavor, nutritional value, and use in cooking. They provide essential vitamins and antioxidants and are best when fully ripe to maximize taste and nutrients.
Seeds are collected for planting, nutritional value, and medicinal uses. Mature, dry seeds ensure high germination rates and strong seedlings, while also being used in cooking and remedies.

#### Picking Rules for Different Plant Parts

By employing appropriate tools and techniques tailored to each plant part, we can minimize damage and support sustainable harvesting practices. Here are the specific rules for harvesting leaves, flowers, roots, rhizomes, tubers, bulbs, fruits, seeds, shoots, sprouts and stems.

Plant parts	How & when to pick Tools used for picking		
Leaves	Harvest selectively, ensuring that only a portion of the leaves are taken to maintain plant health. Avoid stripping the plant entirely to support continued growth and prevent overharvesting.	<b>Pruning shears and/or scissors-</b> ensure clean cuts to minimize damage and allow the plant to regenerate quickly.	
Flowers	Harvest at peak bloom for optimal fragrance, color, and market value. Avoid picking flowers that are past their prime or not fully open.	Floral snips and/or scissors -allow for precise cutting, which minimizes damage to the flowers and stems.	
Roots	Harvest during the plant's dormant season to minimize stress and damage to the plant. Carefully dig around roots to avoid cutting or bruising them.	Hand trowel and/or digging fork - gently lift roots with minimal disturbance to the surrounding soil. They help avoid cutting or bruising the roots, which preserves their quality and supports the health of the plant.	
Rhizomes	Harvest mature rhizomes while leaving part of the plant undisturbed to regenerate. Do not overharvest to ensure sustainability.		
Tubers	Harvest tubers after the plant's growth cycle has completed, ensuring they are fully developed. Handle gently to avoid bruising.	fully carefully to extract tubers without	
Bulbs	Harvest when the plant is dormant, ensuring the bulb is fully matured. Allow the bulbs to dry before storing.		
Fruits	Harvest fruit when it is fully ripe to ensure maximum flavor and nutritional value. Handle gently to prevent bruising or damage.	Hands and soft-lined baskets -use hands for picking and fruit transfer to avoid damage and baskets to protect fruit during collection and transport.	
Seeds	<b>Collect mature, dry seeds from healthy</b> <b>plants</b> to ensure high germination rates and strong disease-resistant seedlings. Mature seeds have fully developed, and dry seeds are less prone to mold and decay, contributing to better plant health and growth.	Hands and small containers-using hands for careful selection and collection of seeds, ensures only the best are taken. Small containers help keep the seeds organized and dry, preventing damage and maintaining their quality.	

Shoots & Sprouts	Harvest young shoots before they become tough or woody. Selectively pick young shoots whilst avoiding overharvesting to allow the plant to continue growing.	<b>Sharp knife and/or scissors</b> – make precise cuts to ensure regrowth.
Stems	Selectively harvest stems to allow the plant to regenerate and avoid overharvesting. Harvest when the plant is not actively flowering or fruiting to reduce stress.	<b>Pruning shears and/or sharp knife</b> – ensure clean, controlled cuts to maintain plant health.

### **Picking Limits**

The specific picking limits i.e. how much can be picked without damaging the plant and allowing it to regenerate, vary depending on the plant and its recovery rate. However here are the internationally recognized limit ranges for sustainable harvesting of various plant parts.

Leaves	Harvest only <b>30-50%</b> per plant/ season to allow plants to regenerate and continue growing.			
<i>Flowers</i> Pick only 10-20% of flowers/ plant to support pollination, biodiversity seed production.				
Roots & Bulbs	Collect only <b>20-30%</b> to prevent plant depletion and ensure regrowth.			
Fruits	Take up to only <b>30%,</b> leaving enough for seed dispersal and wildlife while ensuring plant reproduction			
Seeds	Gather only 10-20% to maintain natural reproduction and genetic diversit			
Shoots & Sprouts	Harvest only <b>10-15%</b> of the plant's biomass to avoid over-extraction ar support future growth.			
Stems	Cut up to only <b>30%</b> , ensuring the plant structure remains intact for regrowt and future harvesting			

#### Documentation



Pickers generally rely on their own experience and local shared verbal knowledge of plant populations and seasonal patterns.

Keeping harvesting records provides a way of monitoring plant health over time and guiding future harvesting decisions. Clear, simple, records provide a reliable way to track plant populations over time and allow comparison of larger data sets.

Businesses can build record keeping by suppliers into the business model. If pickers are willing to collect and share their data as part of a mutually beneficial supply relationship businesses could benefit in the long-term by avoiding over picking and reducing waste. Helping preserve wild botanical populations.

Collectors who work closely with pickers and manage purchasing would be ideally positioned to collate this data. By collating harvest data, businesses could help support sustainable collection limits, strengthen supply chain management, and link harvest data to sales and purchasing decisions potentially adjusting collection volumes to market demand.

Annex 1 contains a simple harvest data template with fields for:

- Harvest dates
- Plant species
- Collection locations
- Quantities gathered
- Observations on plant health or weather.

Designed for daily use, the template makes record-keeping easy and supports the development of informed decision making to support sustainable harvesting.

## Chapter 3 Home Drying Techniques for Wild Botanicals

Proper drying is essential for preserving the quality, nutritional value, and potency of wild botanicals, spices, and herbs. Adhering to recommended drying practices minimizes spoilage and ensures that harvested plants retain their beneficial properties.

#### Preparation Before Drying

Remove any dirt, damaged parts, or insects. Rinse gently if necessary and pat dry to remove excess moisture.

Spread plant materials in a single layer to ensure even drying and prevent spoilage. Avoid overcrowding.



#### Site Selection and Drying Environment

Choose a well-ventilated, shaded area protected from direct sunlight. Direct sun exposure can degrade essential oils, colors, and nutrients.

Maintain consistent airflow to prevent mould and spoilage. A dedicated drying rack or suspended drying method helps improve air circulation.

Avoid drying in damp or humid environments, as excess moisture slows the drying process and promotes mould growth.

Keep drying areas clean and free from contaminants such as dust, smoke and strong odors that may alter the plants natural properties.

### Drying Methods and Techniques

Air Drying: Suitable for leafy herbs, flowers, and delicate botanicals. Bundle small bunches together and hang them upside down in a dry, shaded place.

**Screen Drying:** Ideal for fruits, berries, and roots. Spread the materials evenly on mesh screens, ensuring adequate airflow from all sides.

**Low-Temperature Drying:** When using an oven or dehydrator, keep temperatures below 40°C to preserve active compounds and prevent overheating.

#### **Duration and Monitoring**

Drying time varies depending on the plant type, thickness, humidity, and airflow. Leaves, flowers and spices may dry within 3–10 days, while roots and fruits may take longer.

Rotate or turn the drying materials periodically to ensure uniform drying and avoid moisture pockets.

Plant materials are dry when; leaves crumble easily, roots snap cleanly, and fruits are leathery yet firm.

#### Storage and Handling

Store dried botanicals in airtight, opaque containers to protect against light, moisture, and pests.

Use glass, paper, or breathable fabric bags for storage rather than plastic, which can trap residual moisture and cause spoilage. Plastic can be used for long term storage when the plant part is completely dry.

Label each batch with the plant name and drying date to track freshness and quality over time.

Store in a cool, dark place away from heat sources and humidity to maximize shelf life and potency.

By following these drying principles, rural harvesters can maintain the integrity and value of their botanicals, ensuring they are suitable for personal use or commercial sale whilst preserving product quality, minimizing waste and maximizing income.

# Annex 1 Harvest Record Example and Simple Picker's Template

Field	Field Description		
Location	Clear description of the harvest site (e.g., village name, specific field, near a landmark).	Near the riverbank in Chobareti village	
Harvest Date	Date of harvest (day/month/year).	15/04/2024	
Plant Species	Common and scientific name of harvested plant species.	Nettle (Urtica dioica)	
Parts Collected	Specify harvested plant parts: leaves, flowers, roots, etc.	Leaves, Flowers	
Quantity Collected	Quantity of each part (weight or count).	3 kg leaves, 500 grams flowers	
Collection Method	Method of harvesting (e.g., hand-picking, cutting).	Hand-picking, cutting with shears	
Condition of Plant Population	General health of the plant population (signs of overharvesting or damage).	Healthy, slight storm damage	
Harvest Area Size	Area covered during the harvest (in m <sup>2</sup> or hectares).	500 m <sup>2</sup>	
Harvest Intensity	Estimate the proportion of the plant population harvested.	25% of leaf mass	
Sustainability Indicator	Track sustainability, such as plant density or regeneration status.	150 plants per hectare	
Regeneration Status	Ability of plants to regenerate (e.g., new shoots).	New shoots observed in 10% of plants	
Harvest Timing	Stage of plant growth during harvest to prevent overharvesting. Early flowering stage		
Weather Conditions	Weather conditions on the day of harvest (temperature, 20°C, clear skies rain, wind).		
Harvesters	Names of individuals or groups involved in the harvest.	Nino G and Giorgi K	
Follow-Up Actions	Planned follow-up for regeneration, replanting, or monitoring.	Monitor area in 3 months	
Documentation Review Date	Date to review data and ensure sustainable practices.	15/06/2024	

Name:	Field Visit 1	Field Visit 2	Field Visit 3	Field Visit 4
Location				
Harvest Date and Time				
Plant Species				
Parts Collected				
Quantity Collected (kg)				
Weather				
Harvest Intensity (%)				
Condition of Plant Population (Scale of 1-5) (1 is poor 5 is excellent)				

# Annex 2: Georgian, Common English, and Latin Names of the Most In-Demand Wild Botanicals in Georgia

Georgian Name	Latin Name	Common English Name
ასკილი	Rosa Canina	Rose Hip
უკვდავა	Helichrysum arenarium	Dwarf Everlast
ტყის მოცვი	Vaccinium arctostaphylos	Bilberry
ქაცვი	Hippophae rhamnoides	Sea Buckthorn
ევკალიპტი	Eucalyptus viminalis	Eucalyptus
კოწახური	Berberis vulgaris	Barberry
ქონდარი	Satureja hortensis	Savory
სუმახი	Rhus coriaria	Sumac
ომბალო	Mentha pulegium	Pennyroyal
როზმარინი	Rosmarinus officinalis	Rosemary
ორეგანო	Origanum vulgare	Oregano
დაფნა	Laurus nobilis	Bay Laurel

### Bibliography

To guide the implementation of best practices in the sustainable harvesting of wild botanicals, the following reference documents provide crucial guidelines, standards, and strategies. These resources offer in-depth insights into conservation efforts, legal frameworks, and practical techniques essential for preserving ecological balance and ensuring the long-term availability of wild plants. The documents listed below serve as valuable tools for understanding and applying sustainable harvesting principles effectively:

ALCP2 (2022) Wild Botanicals Market Research. Alliances Caucasus 2 Programme. www.alcp.ge

ALCP2 (2022) Wild Botanicals Focus Group Survey Report. Alliances Caucasus 2 Programme. www.alcp.ge

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Food and Agriculture Organization (FAO) (2020) Climate-Smart Agriculture Guidelines. FAO. Practices and strategies for adapting agricultural methods to changing climate conditions.

United Nations Environment Programme (UNEP) (2019) Sustainable Harvesting Practices for Non-Timber Forest Products. UNEP. Techniques and guidelines for harvesting non-timber forest products sustainably.

Convention on Biological Diversity (CBD) (2022) Biodiversity Action Plans. CBD. Plans and strategies for preserving plant biodiversity and supporting ecosystem health.