

What is the sustainable use for plants?

Sustainable uses can be defined as the insurance of maximum material during natural life span, in the longest period of time and by means of the most accurate harvest. In other words, it is the appropriate method for harvesting plants through timely conservation them in their assets in natural environment, promoting the procreation and avoiding damage to plant.

How to grow and cultivate wild plants?

Turkey is one of the major gene centers in terms of wild plants. Most of the plants have not been cultivated yet and they are directly collected from nature for various purposes. Wild plants are capable of adapting rigors of natural conditions and sustaining their existence. Hence, reproduction methods and behaviors of production materials differ from cultivars. The seeds of wild plants cannot germinate as easy as cultivar seeds or cuttings from plant may not root. This situation may work vice versa for some invader plants. Therefore, different techniques and assistive chemicals may be performed for production of wild plants. The most common used methods for propagation of wild plants are cutting, seeding, aerial plant parts (rhizome, stolon etc.) and underground parts (bulbs, tuberous etc.).

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These parts may not give the desired results. Problems in achievement for adaptations or special requirements for germination and rooting can be the major causes. The easiest solution to this issue is to observe fully the conditions of plant natural habitat.

Can each wild plant that grows in the fields be similar to the natural environment?

Most of wild plants are consumed as drug, herbal tea or spice. The medicinal properties of plant and their flavors are dependent on the ratio of active metabolites and components. In this sense, plants which have the most beautiful smell and delicious taste in natural environment may, lose these features in field under irrigated and fertilized conditions. It should be noticed that the most significant remark is to cultivate the wild plants on fields similar to the natural conditions of plant. Generally, excessive fertilization and irrigation may increase yield but not quality.

Take care of future generations by sustainable uses of "Zahter"!**

*Zahter (*Thymbra spicata*) has been represented as a wild plant for this study.

Plant diversity is the largest wealth of Turkey. Conservation and sustainable uses of wild plants are important for environment and future generations.

We should not forget that the greatest threat to wild plants is human beings after natural disasters and drought. Conservation and sustainable uses are their insurance

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CONSERVATION, SUSTAINABLE HARVEST AND USES OF WILD PLANTS

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What is a "Wild Plant"?

Wild plants can be defined as the plants that grow naturally and not cultivated in nature.

Current Status of Plant Diversity of Turkey

Plant diversity can, in general, vary according to the local climate and soil characteristics. Turkey hosts a large number of plant species due to the climate, soil and geographical properties. The number of plant taxa in Turkey is about 12,500 and it is all approximately all over the number of plant species in European continent. One-third of plant species is endemic to, i.e., only found in, Turkey. The agricultural production of a small part of our plant diversity is practiced and many plant species are gathered from nature and used for many purposes such as wild vegetable, folk medicine, herbal tea, natural dyes, ornamental plants, construction materials and decorative objects in our daily life. The amount of these plants constantly varies depending on regions, years, climatic characteristic and collection frequencies from nature. Plant diversity and its amount in nature are decreasing because of lots of factors such as excessive and unconscious collections, natural disasters, global climate change, overgrazing, forest fires, over assarting, environmental pollution and human erroneous applications. Some of the species are, even, are threatened to be in the risk of extinction.

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Why is Plant Diversity Important?

Plants are of the most important elements of natural ecosystem. From smallest living organism to human and animal life, every living thing absolutely needs plants. The known useful sides of plants are not still well documented in spite of last decade's scientific works or folk therapies. Any plant considered to have no benefit and even thought to cause several problems in our daily lives may include a benefit for sustaining of mankind's future life. Accordingly, to protect and sustain their presence of all living things including plants in nature are, if not only we, a humanitarian mission for future generations.

What to do for conservation and sustainable uses of beneficial plants?

The plants used for different purposes in daily life meet our needs and offer economical benefits. Reduction in amount of the plants in nature or even their extinction will primarily adversely affect us. The plants that have economic significance are performed for agricultural practices and in a sense; their assets are protected but other beneficial plants are facing extinction by time. Insurance of their continuity depend on conservation of their assets and their sustainable uses.

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How to conserve our biodiversity?

Plants can continue their own existence unless human interference. When used properly, these plants can re-new themselves each year and can produce more products. There are many ways to protect the plants beneficial for us and naturally growing in our environment.

When is the right time to collect the plants?

As a general rule for medicinal and aromatic plants, leaves at the flowering stage, flowers at the end of budding or beginning of flowering stage, fruits and seed at the ripening period, underground organs such as root, rhizome and bulbs after drying aerial parts of plants should be collected. Flower and leaves should be, particularly, collected in dry and sunny weather (Baydar, 2007).

While collecting,

1. It should be avoided to damage to the procreation and reproduction organs of plant
2. It should be prevented excessive animal grazing
3. Endemic and rare plants should be carefully conserved
4. Cultivation should be, if the climate and soil conditions are appropriate, preferred instead of collection from nature
5. A quota should be set for the continuity of plant collection
6. It should be avoided to damage to other species, habitat and vegetation

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