

## **Some Non-Wood Forest Products of Kastamonu Region (Herbal Products Potential)**

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**ABSTRACT :** *Our country with a huge variety of flora reserves lots of medical and aromatic plants within its structure. Plants provide the necessary oxygen and nutrient for human beings to survive and protect the human health. Usage of plants for treatment begins with history of humanity. The wooden materials from the forests until recent years have been the main objective of forestry. However, rapid population growth, drugs and raw materials and people to be aware that natural and healthy diet with the increase in demand for non-wood products has increased. In this increase, in addition local and national economies in terms of non-wood forest products an important source of income and to be seen, as the world in general, it has a great sharing that the demand for natural products to increase abundantly. The content of non-wood forest products of wild food plants, medicinal plants, aromatic plants, dye plants, bulbous plants, mushrooms and honey can be exemplified. In this study, from the beginning of the species grows naturally in Kastamonu, *Hypericum perforatum L.*, *Rosa canina L.*, *Orchis anatolica Boiss*, *Castanea sativa*, *Tilia rubra DC. subsp. caucasica.*, *Crataegus tanacetifolia (Lam.) Pers*, *Crataegus orientalis var. obtusata*, *Crataegus microphylla C. KOCH*, *Laurus nobilis*, *Rhus coriaria L.*, *Rubus discolor*, *Berberis vulgaris L.*, *Berberis crataegina DC.* is made as an overall assessment.*

**KEY WORDS:** *Non-Wood Forest Products, Kastamonu*

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### **I. INTRODUCTION**

The State Planning organisation (SPO) 2001, describes the non-wood forest products (NWFP) as: all kind of plant and animal products obtained from the forests. The term Non Wood Forest Products (NWFP) encompasses all biological materials other than timber which are extracted from forests for human use. It is well known fact that the concept of the production of non-wood forest products in our forestry becomes more important day by day. Many various applications and researches on this subject have been carried out so far. In recent decades the role of forests has changed in Europe. As a result of social and economic developments the environmental, biological and recreational aspects of forestry have become more important. Especially in the more densely populated areas of Europe, forests play an increasingly important role in recreational activities. In response to the increasing economic, ecological and social demands on forest resources and their sustainable management, national forest and environmental policies as well as the international forest regime are undergoing substantial changes. Surface area of 21.5 million hectares of the country with 27.6% percent of its biological diversity of forests which constitute the major part of the forest, known as the secondary product of its non-wood forest products. In recent years, awareness and demand towards non-wood forest products is increasing. This increase in terms of local and national economies is an important come into sight non-wood forest products as a source of income and employment, as well as general, the demand for natural products has prominently share of with the increase in the world (Fidan vd., 2013). Many people who live in the rural area are using the forest resources in a wide range. Many studies showed that many people who live in the forest villages need, to live and to continue their life, the natural resources (Toksoy vd., 2010).

Forests play a vital role in global food security, providing food, fodder, fuel and medicine. Throughout the developing world, women make a significant contribution to Forestry (FAO, 2007). About 80% of the population of the developing world depends on NTFP for their primary health and nutritional needs (FAO, 1995). Tarakçioğlu (2009) states that: the contribution of NWFP to Turkey's economy is 120 million dollars and also creating job opportunities to the thousands of forest villagers. Turkey is abundant in terms of plant species diversity, wild-life resources and endemic species. Approximately there are 10.500 different plant species in Turkey and 32% (3400 pcs) of these are endemic species. Flora richness that is one part of this diversity is due to its geographical position, being in meeting point of Euro-Siberian, Mediterranean and Irano-Turanian flora regions, creating a bridge during migration of plants between southwest Asia and south Europe, having different climate types, topographical structures and different altitudes, being origin and differentiation center of many natural and culture genus and sections, having ecological differences on east and west side of Anatolia diagonal and because of successive glaciations in Quaternary having very much endemic species (Öner ve Akbin, 2011).

Forest products concept, generally divided into two parts can be described as; the wood produced from the forest and the other gains. In the past the done distinction was like: Primary products and the by-products, has been changed in our times according to the changing and developing forest benefit procedures and human needs; non-wood forest products (NWFP). The new notion is also accepted by national and international studies (Türker, 2011). Today, According to the modern forest management activities the gotten forest products are divided into 2 categories such as: primary products and the by-products. The primary products means the wood and firewood. These can be classified as: timber, utility pole, mine prop, industrial wood, wood for paper, fibre and chip wood, rod, stick and firewood.

The by-products contain: all kinds of essential oils, fruits, seeds, flowers, leaves, barks, roots, young branches and shoots, bulbs, tubers and mushrooms with rhizomes except trees, shrubs, herbaceous plants and their woods (Kurt, 2011). The abundance of Turkish flora is also an important source for using the plants with different purposes (Kaya vd., 2012). Turkey has great potential in producing non-wood forest products. In 1995, at a meeting in Indonesia FAO defined the NWFP as: "Goods of biological origin other than wood derived from forests, other wooded land and trees outside forests". Later on it was stated that "this definition is incomplete because of not including the social, cultural, religious, decorative, environmental and other important non-wood forest protection functions of forests hence for fulfilling this gap a new definition was recommended." The content of non-wood forest products can be exemplified such as: Wild food plants, medicinal plants, aromatic plants, dye plants, bulbous plants, mushrooms and honey.

If we go into details:

- Besides the environmental functions of such species; pine, linden, walnut, oak, chestnut, hazelnut, cranberry, hawthorn, almond, acacia, juniper, eucalyptus, rhododendrons, locust, sweet gum, laurel also their wood, bark, fruits, flower and leaves.
- The flower, leaf and bulbs of plants such as; white crocus, sumac, rosemary, mountain tea, white lily, soapwort, sage, thyme, black currant, snowdrops, lemon balm, belladonna, buckthorn, Crown imperial, hyacinths, calendula, shepherds tulip, fern, orchid, winter windflower and so on.
- Fruits and flowers of plants such as blackberries and rosehips,
- Natural edible mushrooms,
- Lichen, moss and straw. (Anonymous, 2011; Konukçu, 2001) may be given as the examples of NWFP.

The importance of NWFP is not only because it is versatile (economically, socially, culturally and ecologically) also because of the width of the mass benefit from NWFP and their benefit.

Literally, today in Turkey; these products especially in rural places stand out in terms of the balance of revenues, employment and ecological tourism and etc. In some rural regions NWFP generates revenue more than the wood production with classic forestry (Büyükgediz, 2006).

The amount of important NWFP in the foreign trade is 150, the annual foreign trade volume is estimated around 1.1 billion dollars. The 60% of import was done by USA, EU countries and Japan. The main exporter countries are China, India, Malaysia, Thailand, Brazil and Sudan (Anonymous, 2001).

## **II. MATERIAL AND METHOD**

Turkey, in the northern hemisphere, is a country located at the crossroads of Europe and Asia. A large part of the country's territory is located in the Anatolian peninsula. The country's three sides of the Mediterranean, the Black Sea and the Strait that connects the two seas surrounded by the Sea of Marmara and the Aegean Sea. The floristic regions of Turkey: Mediterranean floristic region, Euro-Siberian floristic region, and Iran-Turanian floristic region (ITFR) (Atalay, 1994). Kastamonu is located in the Western Black Sea region, to take place in the Euro-Siberian floristic region. At this study, a general assessment was made on the potential NWFP of Kastamonu region about their family, scientific and local names and the usage are of these species which were also used and marketed by the habitants.

## **III. FINDINGS**

At Kastamonu region, the naturally distributed plant species which are used by local people for various purposes and their; scientific names, family, local names and usage areas were shown on figure 1 (Anonymous, 2014; Ülgen ve Zeydanlı, 2008)

Figure 1. The naturally distributed plant species of Kastamonu region which are used by local people for various purposes and their; scientific names, family, local names and usage areas.

Scientific Name	Local Name	Usage Areas
<i>Arbutus unedo</i>	Kocayemiş	Fruits are eaten.
<i>Berberis vulgaris</i>	Kadin tuzluğu Karamuk	Root or bark is used as an appetizer and antipyretic.
<i>Castanea sativa</i>	Kestane	Raw or cooked, in various ways is consumed by humans.
<i>Cerasus mahaleb</i>	Mahlep İdris ağacı	Is used in diabetes and shortness of breath
<i>Cerasus avium L.</i>	Yabani kiraz	Is used in making pastry and beverages.
<i>Cornus mas</i>	Kizilcik, kiren	The fruits are used to worm or reducing the fever.
<i>Crataegus orientalis</i>	Kırmızı aliç	Fruits are eaten.
<i>Crataegus monogyna</i>	Geyik dikenini, yemişen	Fruits are eaten.
<i>Cotonoster nummularia</i>	Dağ muşmulasi	Fruits are used as savory and in stomach discomfort.
<i>Frangula alnus</i>	Barut ağacı	Is effective in in stomach discomfort.
<i>Fragaria vesca</i>	Yabani çilek	Fruits are eaten. roots and rhizomes are used in various ailments
<i>Hippophae rhamnoides</i>	Yer iğdesi	Has highly Vitamin C and antiseptic.
<i>Laurus nobilis</i>	Defne	Is antiseptic and used in stomach discomfort.
<i>Ligustrum vulgare</i>	Kurtbağrı	Is used as plant, living fence and for preventing the erosion.
<i>Malus sylvestris</i>	Yabani elma	Is used as fruit juice and tea.
<i>Mespilus germanica</i>	Muşmula, beş biyik	Is used in bowel diseases.
<i>Myrtus communis</i>	Mersin, murt	Is used in tanning of the leather with arborvitae.
<i>Orchis anatolica Boiss</i>	Anadolu salep otu	Is used in stomach discomfort.
<i>Pistacia terebinthus</i>	Menengiç	Ripe fruits are used to produce Edible oil.
<i>Prinus spinosa</i>	Çakal eriği	Leaves and fruits are used for various purposes.
<i>Pyrus elaeagnifolia</i>	Ahlat	Fruits are used in intestinal disorders.
<i>Pyracantha coccinea</i>	Ateş dikenini	The fruits are used to soothing heart.
<i>Rosa canina</i>	Kuşburnu	Is used as tea and marmalade.
<i>Rubus caesius</i>	Böğürtlen	Its fruits are used in the treatment of diabetes.
<i>Sambucus nigra</i>	Mürver	Leaf and stem bark is used in a variety of disorders.
<i>Sambucus ebulus</i>	Cüce mürver otu	Dyestuffs are obtained from the fruits.
<i>Smilax excelsa</i>	Diken ucu, melevcan	Fresh shoots are used as vegetables.
<i>Sorbus aucuparia</i>	Kuş üvezi	The leaves are used in chest discomfort.
<i>Sorbus umbellata</i>	Üvez	Fruits are eaten as nutrient.
<i>Viburnum opulus</i>	Gilaburu	Fruits are eaten.
<i>Viburnum lantana</i>	Germişek	Fresh branch bark is used as a painkiller.

#### IV. RESULTS

In recent years because of the human beings' increasing attention and interest to natural nutrients, the demand of non-wood forest products increases as well. Hence, the local people are causing too much damage when they are collecting or using the herbs unconsciously. For reducing this damage to a certain extent, the natural distributed NWFP species of Kastamonu region, should be produced in culture media out of their natural area and such studies must be more important. The support of forest administration will reduce the pressure on natural NWFP. The local people, should be educated on; identification, collection, transportation and storage of these products. About the natural areas of NWFP; some organisations should be created between the non-governmental organisations and locals for ensuring the coordination and cooperation. The inventory of NWFP based on species and region should be created and the planning must be done according to these inventory databases. For this purpose the scientific studies are needed done by the experts.

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