



Determination of Medicinal and Aromatic Plants Sold by Herbalists in Afyonkarahisar Province and Their Usage Purposes

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Abstract

This study was carried out to determine natural plants sold in herbalists of Afyonkarahisar province and to identify the intended use of these plants. Between 2019-2020, a face to face interview was conducted with 10 herbalists. According to the results of the survey, 50 different plants were sold and especially sage, black seed, poppy, lime, clove, black pepper, thyme, red pepper, cumin, rosehip, mint, chamomile, fennel, sumac, sesame, cinnamon, green tea, ginger and It has been determined that the sales of turmeric plants are intense. The most common sales are in the winter months. Especially, plant are sold like strengthen the immune system and cure the common cold. In summer, an increase is in the sales of plants that have a debilitating feature. According to opinion of herbalists, preference of people's purchasing to plants are affected by doctor advice, other people, media, and books. In order to increase the use of medicinal plants, it has been necessary to examine the plants extensively by different experts, increase scientific studies, contribute to the development of plant exports and sell controlled, registered plants.

Keywords: Afyonkarahisar, Herbalist, Medicinal and aromatic plants, Ethnobotany, interview.

Afyonkarahisar İli Aktarlarında Satılan Tıbbi ve Aromatik Bitkiler ve Kullanım Amaçlarının Belirlenmesi

Öz

Bu çalışma Afyonkarahisar ili merkez ilçesi aktarlarında satılan doğal bitkileri tespit etmek ve bu bitkilerin kullanım amaçlarını belirlenmesi için yapılmıştır. 2019-2020 yılları arasında 10 aktar ile yüz yüze sözlü görüşme yapılmıştır. Araştırma sonucuna göre 50 farklı bitkinin satıldığı ve özellikle adaçayı, çörek otu, haşhaş, ıhlamur, karanfil, kara biber, kekik, kırmızı biber, kimyon, kuşburnu, nane, papatya, rezene, sumak, susam, tarçın, yeşil çay, zencefil ve zerdeçal bitkilerinin satışının yoğun olduğu belirlenmiştir. Mevsim olarak en yoğun satışın kış aylarında yapıldığı ve özellikle soğuk algınlığını tedavi eden ve bağışıklık istemini güçlendiren bitkilerin satıldığı tespit edilmiştir. Yaz aylarında ise zayıflatıcı özelliği olan bitkilerin satışında artış görülmektedir. İnsanların bitkileri satın almadaki tercihlerini doktor tavsiyesi, aile ve çevredeki insanlar, görsel ve işitsel basın, reklamlar ve kitap/dergiler etkilemektedir. Tıbbi bitkilerin kullanımının artması için, bitkilerin farklı uzmanlar tarafından kapsamlı şekilde incelenip, bilimsel çalışmaların artırılması, bitki ihracatının gelişmesine katkı sağlanması ve kontrollü, kayıtlı bitkilerin satışının gerekliliğine varılmıştır.

Anahtar Kelimeler: Afyonkarahisar, Aktar, Tıbbi ve aromatik bitkiler, etnobotanik, sözlü görüşme.

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1. Introduction

The relationship between nature and human has turned into an accumulation with the knowledge, experiences, intensive studies and religious beliefs that have been passed on from generation to generation, and today the ethnobotanical science branch has emerged, which the whole world accepts its importance (Arihan, 2003; Başgel, 2005, Faydaoğlu & Sürücüoğlu, 2011; Yiğit, 2014).

In recent years, due to the high side effects of drugs produced by synthetic means, the trend towards natural herbs has increased. People consume herbs and herbal teas due to their beneficial effects, and use herbal medicines in the treatment of minor and minor diseases (Sayar et al., 1995; Gelse, 2012; Özdemir, 2019). Folk remedies in Anatolia have reached today as a result of long-lasting experiences. Many drugs used in modern medicine are obtained from plants (Faydaoğlu & Sürücüoğlu, 2011; Yiğit, 2014). The social values of being a habit dating from the Ottoman and Anatolian people by transferring up to today and herbal treatments were carried out with traditional knowledge in Turkey. Today, Anatolian people have not lost their faith in herbal medicines. People both practice the diagnosis and treatment of medicine, as well as use the herbs they buy from herbalists for some diseases as preventive and

therapeutic (Koçtürk et al., 2009, Açıkgöz et al., 2012; Yiğit, 2014).

This research was carried out in Afyonkarahisar province, which has a very special cuisine culture that is dependent on its traditions and customs and where the use of spices is intense. It was aimed to determine the natural plants sold in the central district of Afyonkarahisar province and to determine the intended use of these plants and the way of supply, the plants that people consume heavily, the seasonal intensive sales times, the consumed parts of the plants and the factors that affect the people's preferences in purchasing the plants.

2. Material and Method

10 herbalists that interviewed in this study, medicinal-aromatic plants and the products on sale obtained from these plants constitute the material of the study. In 2019 and 2020, an interview study was conducted with 10 herbalists in Afyonkarahisar province in the form of face-to-face interviews through questionnaire forms. The questions in the table below were asked to 10 herbalists in the central district of Afyonkarahisar province and their answers were recorded. In addition, the photos of the products in the shops of the permitted herbalists were taken (Figure 1; Table 1).



Figure 1. Some herbalists interviewed during survey

Table 1. Inquiry questions

No	Questions
1.	What is your educational background?
2.	Have you educated on medicinal and aromatic plants?
3.	How do you get the natural herbs that you sell?
4.	Which plants do you sell?
5.	What are the plants people take densely?
6.	Which season is the busiest sale?
7.	Which plants are taken intensively in winter?
8.	Which plants are taken intensively in summer period?
9.	What parts of the plants are consumed?
10.	For what purposes people buy plants?
11.	What or who influences people's preferences for purchasing herbs?
12.	Do you have any recommendations for increasing the use of medicinal herbs? If so, what is it?

3. Results and Discussion

In interviews, the first question posed to herbalists is their education status. In Afyonkarahisar province, most of the herbalists are secondary school-high school graduates, while a few of them are undergraduate graduates. To the question of whether you have received training on medicinal and aromatic plants, it was determined that a small part of them attended training and seminars related to herbalism, but the majority grew

up as a family profession. When asked about how they obtained the natural plants they sell, they answered that they bought from herbal drug exporters and plant collectors in the villages. In addition, they stated that they obtained herbal products used for various purposes from factories processing non-wood products. Which plants they sell, which plants are sold intensively, which parts of the plants are used and for what purposes are given in Table 2. It differs in the plants people buy in summer and winter.

Table 2. Plants for sale, used parts and intended uses

	Plant name	Botanical name	Family	Used part	Usage	Purpose of usage
1.	Allspice	<i>Pimenta racemosa</i> Mill.	<i>Myrtaceae</i>	Seed	Spice	In the treatment of digestive system problems and muscle pain
2.	Anise	<i>Pimpinella anisum</i> L.	<i>Apiaceae</i>	Fruit, Seed	Tea, Medicine	Increasing breast milk, cough, bee roasting
3.	Balm	<i>Melissa officinalis</i> L.	<i>Lamiaceae</i>	Leaf	Tea	Calming for nerves and stress
4.	Basil	<i>Ocimum basilicum</i> L.	<i>Lamiaceae</i>	Leaf	Spice, Food	Stomach and digestive system ailments, calming against nervous and stress, insomnia
5.	Berberberry	<i>Berberis vulgaris</i> L.	<i>Berberidaceae</i>	Root, Leaf, Fruit	Food, Medicine	Cancer treatment, in the treatment of heart palpitations
6.	Black Cumin	<i>Nigella sativa</i> L.	<i>Ranunculaceae</i>	Seed	Spice, Medicine	Treatment of cancer, stomach ailments and blood purification
7.	Black pepper	<i>Piper nigrum</i> L.	<i>Piperaceae</i>	Seed	Spice, Food	Clapper crisis, anti-paralysis, anti-cancer, debilitating
8.	Calendula	<i>Calendula officinalis</i> L.	<i>Asteraceae</i>	Flower	Medicine, Cosmetic	Blood purifier, jaundice, intestinal ulcer, fungus, skin diseases and blemishes treatment
9.	Cardamom	<i>Elettaria cardamomum</i> Roxb.	<i>Zingiberaceae</i>	Fruit	Spice, Food	Detox, digestive system regulator
10.	Carob	<i>Ceratonia siliqua</i> L.	<i>Fabaceae</i>	Fruit, Seed	Food, Medicine	Strengthening the immune system, energizing, in the treatment of anemia
11.	Centaury	<i>Hypericum perforatum</i> L.	<i>Hypericaceae</i>	Leaf, Flower	Medicine, Cosmetic	Treatment of wounds, treatment of headache and insomnia
12.	Cherry stalk	<i>Prunus avium</i> L.	<i>Rosaceae</i>	Stem	Tea, Medicine	Slimming, menstrual pain relief, diuretic, anti-edema and detox
13.	Cinnamon	<i>Cinnamomum zeylanicum</i> L.	<i>Lauraceae</i>	Bark	Spice, Food	Anti-diabetes, antioxidant, against infections and flavoring

	Plant name	Botanical name	Family	Used part	Usage	Purpose of usage
						desserts
14.	Clove	<i>Caryophyllus aromaticum</i> L.	<i>Myrtaceae</i>	Flower bud	Spice, Food, Tea	Strengthening the immune system, against toothache, nausea, antioxidant and blood circulation regulator
15.	Corn	<i>Zea mays</i> L.	<i>Poaceae</i>	Tuft, Fruit	Food, Tea, Medicine	As digestive system regulator, cholesterol balancing, anemia and energizer
16.	Coriander	<i>Coriandrum sativum</i> L.	<i>Apiaceae</i>	Fruit	Spice, Food	Diuretic, antioxidant, cholesterol and blood sugar regulator
17.	Coven	<i>Gypsophila arrostii</i> Guss.	<i>Caryophyllaceae</i>	Root	Medicine, Cosmetic	Treatment of constipation and diuretic
18.	Cumin	<i>Cuminum cyminum</i> L.	<i>Apiaceae</i>	Seed	Spice, Food	Strengthening the immune system, digestive system regulator, cholesterol stabilizer and carminative
19.	Daisy	<i>Matricaria chamomilla</i> L.	<i>Asteraceae</i>	Flower	Tea, Cosmetic	Sedative, migraine, abdominal pain and hair in lightening the color
20.	Daphne	<i>Laurus nobilis</i> L.	<i>Lauraceae</i>	Leaf	Spice, Medicine, Cosmetic	In the treatment of common cold, flu, infection, pain relief and menstrual problems
21.	Echinacea	<i>Echinacea purpurea</i> (L.) Moench	<i>Asteraceae</i>	Leaf, Flower	Tea, Medicine, Cosmetic	Strengthening the immune system, Treatment of upper respiratory tract infection and flu and cold
22.	Eucalyptus	<i>Eucalyptus globulus</i> L.	<i>Myrtaceae</i>	Leaf	Medicine	In the treatment of upper respiratory tract diseases, expectorant, in the treatment of fungus
23.	Fennel	<i>Foeniculum vulgare</i> Mill.	<i>Apiaceae</i>	Fruit, Seed	Tea, Medicine	Breast milk enhancer, carminative and detox
24.	Ginger	<i>Zingiber officinale</i> Rosc.	<i>Zingiberaceae</i>	Root, Rhizome	Spice, Food	Strengthening the immune system, Upper respiratory tract infection and Slimming
25.	Green tea	<i>Camellia sinensis</i> L.	<i>Theaceae</i>	Leaf	Tea	Detox and slimming
26.	Heather	<i>Erica vulgaris</i> L.	<i>Ericaceae</i>	Leaf	Tea, Medicine	Diarrhea, in the treatment of diarrhea and kidney stones, debilitating, against skin diseases other than oil
27.	Jasmine	<i>Jasminum officinale</i> L.	<i>Oleaceae</i>	Flower	Tea, Cosmetic	Antioxidant, cancer, cardiovascular health and sedative
28.	Lavender	<i>Lavandula angustifolia</i> Mill.	<i>Lamiaceae</i>	Leaf, Flower	Cosmetic, Medicine	In the treatment of stomach and liver diseases, sedatives, migraine treatment, moth repellent and fragrance
29.	Lavender	<i>Lavandula stoechas</i> L.	<i>Lamiaceae</i>	Leaf, Flower	Tea, Medicine	In the treatment of sinusitis, cough, chronic cold and feverish cold, preventive of vascular occlusion
30.	Liden	<i>Tilia platyphyllos</i> Scop.	<i>Tilaceae</i>	Leaf, Flower	Tea, Medicine	In the treatment of cold, flu and cold
31.	Mahaleb	<i>Prunus mahaleb</i> L.	<i>Rosaceae</i>	Fruit	Food	Strengthening the immune system, In the treatment of cough and asthma
32.	Marshmallow	<i>Althaea officinalis</i> L.	<i>Malvaceae</i>	Seed, Flower	Tea, Spice	In the treatment of gastritis, reflux, common cold, flu and cold
33.	Mate	<i>Ilex paraguariensis</i> L.	<i>Aquifoliaceae</i>	Leaf, Stem	Tea, Medicine	Detox, appetite suppressant, debilitating, immune system

	Plant name	Botanical name	Family	Used part	Usage	Purpose of usage
						booster
34.	Mint	<i>Mentha piperita</i> L.	<i>Lamiaceae</i>	Leaf	Spice, Food, Tea	Treatment of common cold, nausea and oil in the treatment of headache
35.	Mistletoe	<i>Viscum album</i> L.	<i>Santalaceae</i>	Leaf, Fruit	Medicine	In balancing blood pressure, in the treatment of diabetes, upper respiratory diseases and against stress
36.	Olive	<i>Olea europaea</i> L.	<i>Oleaceae</i>	Leaf	Tea, Medicine	Blood coagulation, Antioxidant, Diabetes, Vitamin E and skin health
37.	Poppy	<i>Papaver somniferum</i> L.	<i>Papaveraceae</i>	Seed	Spice, Food	Digestive disorders, constipation, heart disease and pain relief
38.	Red pepper	<i>Capsicum annuum</i> L.	<i>Solanaceae</i>	Fruit	Spice, Food	Strengthening the immune system, vitamin C, antioxidant, pain reliever, metabolism accelerator and cholesterol regulator
39.	Rosehip	<i>Rosa canina</i> L.	<i>Rosaceae</i>	Fruit	Food, Tea	In cold, flu, diabetes, vitamin C and for making marmalade
40.	Rosemary	<i>Rosmarinus officinalis</i> L.	<i>Lamiaceae</i>	Leaf, Flower	Tea, Spice, Medicine	In migraine treatment, edema relief, fat burner and cholesterol treatment
41.	Safflower	<i>Carthamus tinctorius</i> L.	<i>Asteraceae</i>	Seed, Flower	Tea, Medicine	In the treatment of blood sugar, cholesterol and skin inflammation
42.	Saffron	<i>Crocus sativus</i> L.	<i>Iridaceae</i>	Leaf, Flower, Stem	Spice, Food, Tea	Antioxidant, cancer treatment, skin cleanser, good for liver and heart
43.	Sage	<i>Salvia officinalis</i> L.	<i>Lamiaceae</i>	Leaf, Flower	Tea, Medicine	In the treatment of common cold, flu and cold
44.	Sahlep	<i>Orchis</i> L. sp.	<i>Orchidaceae</i>	Root	Food	Constipation, hemeroid, digestive system problems, chest diseases and memory enhancement
45.	Senna	<i>Cassia angustifolia</i> L.	<i>Fabaceae</i>	Leaf	Tea, Medicine	In the treatment of constipation
46.	Sesame	<i>Sesamum indicum</i> L.	<i>Pedeliaceae</i>	Seed	Spice, Food	Cancer, heart health, cholesterol, skin rejuvenation and bone health
47.	Sumac	<i>Rhus coriaria</i> L.	<i>Anacardiaceae</i>	Leaf, Seed	Spice, Food	Antioxidant, diuretic and gynecological diseases
48.	Thyme	<i>Thymus vulgaris</i> L.	<i>Lamiaceae</i>	Leaf, Flower	Spice, Food, Tea	Strengthening the immune system, In the treatment of cold, flu and cold, in eliminating digestive system problems
49.	Turmeric	<i>Curcuma longa</i> L.	<i>Zingiberaceae</i>	Root	Spice, Food	Strengthening the immune system, against cough, sore throat and liver ailments
50.	Walnut	<i>Juglans regia</i> L.	<i>Juglandaceae</i>	Leaf, Fruit	Tea, Food	Alzheimer, diabetes, cancer, cholesterol, blood pressure regulation and weight loss

* The intensely sold plants are written in bold font.

Customers prefer various teas such as rosemary, green tea, cherry stalk, mate, heather, senna for slimming in summer, while in winter, immune-enhancing and cold-curing herbs such as linden, thyme, sage, cinnamon, rosehip, echinacea, clove, mint are at the forefront. People's preference for purchasing plants is influenced by doctor's advice, family and people around, visual

and audio media, advertisements and information in books / magazines. In order to better understand the applications of medicinal plants and their use in a wide range of areas from pharmaceutical and food industry to cosmetic and taste industries, traditional and alternative therapists, and the drugs derived from these plants, their botanical properties, chemistry,

pharmacology, toxicology and clinical effects are well researched and their usefulness should be demonstrated. Turkey is one of most important countries in terms of medicinal and aromatic plants. However, these plants export are not yet at desired levels. Herbalists want the necessary studies to fulfilled for the development of medicinal and aromatic plant exports. They recommend that people shop from the herbalists they know and trust, and if they do not know, they should research well. They also emphasized the importance of choosing packaged products. Because they stated that with the development of technology, every packaged product has a business number and it is possible to query the products even on the internet.

4. Conclusions and Recommendations

There are some studies on medicinal and aromatic plants sold in herbalists. In the study conducted in Konya by Tulukçu and Sağdıç (2011) during the summer of 2008 and 2009, the medicinal plants found in herbalists, depending on the interest of the public (flax, black cumin, thyme, nettle and such as chamomile) are divided into two groups, those in high demand and those that are less in demand. It was determined that most of the drugs found in herbalists in Konya consist of plant organs such as leaves, seeds, fruits, flowers, roots, branches, rhizomes and onions and their dried parts.

Sarıkaya (2019) determined sage, anise, rosemary, black cumin, laurel, basil, heather, poppy, linden, femininity, centaury, cardamom, cloves, black pepper, black pepper, carob, thyme, red pepper as sold plants in herbalist of Kütahya. Plants such as chili pepper, cumin, coriander, rosehip, lavender, mahaleb, mate, corn tassel, mint, lemon balm, chamomile, fennel, saffron, salep, senna, sumac, sesame, cinnamon, jasmine, ginger, turmeric are the most preferred. Results that determined in these studies support our study.

According to the results of the study, most of the herbalists continue the family profession and have been trained for the herbalist profession from an early age. 50 different herbs are sold, sage, black cumin, poppy, lime, clove, black pepper, thyme, red pepper, cumin, rosehip, mint, chamomile, fennel, sumac, sesame, cinnamon, green tea, ginger and turmeric herbs are sold extensively has been determined. It has been determined that the most intensive sales are made during the winter months and plants that treat colds and strengthen the immune system are sold especially. In order to increase the use of medicinal plants, it is necessary to increase comprehensive scientific studies and to support the development of plant exports. Smilar results are emphasized in other studies (Korkmaz et al., 2011; Akyol et al., 2017).

It is known that some of the medicinal plant trade is known by official records, and a significant portion is uncontrolled and unconscious. The producer and place of production of many plants that are widely traded are unknown. This is an important problem in terms of the reliability of the product as well as commercial, and it is recommended to switch to a registered and certified system. Particularly, there is an increase in the interest in plants with hearsay information among the media, internet and the public. Sometimes, as a result of misdirection, situations that threaten human health arise. In order to prevent such situations, detailed scientific studies on medicinal and aromatic plants and their active ingredients should be increased and the people should use the plants consciously. It has been determined

that the storage conditions of the plants sold in the herbalists until they are collected, dried and transferred to the herbalists are unknown. It should be ensured that this process is converted into a recorded and traceable format. Plants collected from nature by irregular and wrong methods cause the destruction of our biological diversity and even the extinction of some plants. In order to prevent plant diversity from decreasing, it should be ensured that plant collectors become aware of conscious and quota collection methods and that the species that are in danger of extinction are included in culture.

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