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# SOME EDIBLE HERBS CONSUMED AS VEGETABLES AROUND DIYARBAKIR - AKBANDIR PLANT

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**Abstract**

This research was conducted to determine some wild plants consumed as vegetables in Diyarbakir and its close region (Siverek-Karacadağ) and to survey the consumption patterns of these weeds like Akbandır by the local people. Our survey and field studies have began in the spring period (April-May). *Gundelia tournefortii* L. (Kenger), *Ornithogalum narbonense* L. (Akbandır), *Mentha pulegium* L. (Yarpuz), *Malva neglecta* (Millbelly), *Portulaca oleracea subsp. oleracea* (Purslane), *Nasturtium officinale* R. Br. (Sugar), *Capsella bursa-pastoris* (L.) Medik. (Shepherd's purse), *Anchusa azurea* Miller (Guriz-Cow), *Rheum ribes* L. (Light, ışgın) and these plants It has been determined that these plants used for various purposes (food stuffing, salad, frozen winter vegetables). In addition to this research, a survey was conducted on the Akbandır plant with the people working in the collection of this plant in Diyarbakır city center, its districts and its immediate around (Siverek, Karacadağ). It was determined that 100% of Akbandır collectors who participated in the survey did not cultivate these plants, but collected the ones that exist spontaneously in nature. It was observed that 75% of the respondents stated that these plants are gradually decreasing in nature, and 100% of the respondents answered local markets when asked where do you sell these products. With this study, it was tried to create awareness in terms of the importance of other weeds, especially the Akbandır plant, which is consumed as a vegetable in Diyarbakır and its arounds. With the cultivation of these plants, which may face extinction in the future, it is aimed to maintain their contribution to human health and to increase the income of the families who collect these plants, which have economic returns.

**Key words:** Akbandır, Diyarbakır, Vegetable, Weed.

## INTRODUCTION

Edible herbs; they are plants that have beneficial components for human health such as vegetables, fruits and grains and are used as food (Varona, 2001). Most of the edible herbs are plants rich in nutritional value and vitamins. In addition, it is stated that these grasses are extremely important for a balanced nutrition culture, especially in societies with limited food resources (Doğan, 2013). However, it is also stated that edible herbs richer in minerals than cultivated plants (Doğan et al., 2004). Edible herbs collected by the people of the region during certain seasons of the year (especially in spring in our region) and sold in local markets, and sometimes in markets and greengrocer sections in metropolitan cities. Some edible herbs are consumed thought that they are beneficial for health and called as medicinal foods (Etkin, 1994). Some substances contained in these plants have positive contributions to human health, and consumption habits have increased for this reason. In the changing and developing world order, the necessity of meeting the food and nutrition needs of people has been one of the first issues of governments working on. In many region of the world, people have tended to natural

agricultural products instead of consuming products from intensive agriculture. In the light of these developments, consumers have started to acquire the habit of consuming naturally grown products as well as plants that grow spontaneously in nature.

The local people who help these plants reach their table and mostly live in rural areas, due to their own health and economic gains, sometimes go to stony lands, sometimes wet lands and sometimes to high altitude areas, especially during the limited periods when these plants reach harvest maturity and work to collect them. Those who collect these plants generally use parts such as fruit, seeds, bark, leaves and tubers (Aksakal and Kaya 2008). Thus, while the contribution of edible weeds to human health and economy increases, on the other hand, it can invite the destruction of these weeds due to excessive consumption and erosion of lands.

It is a known fact that wild plants play an important role in human health due to their bioactive properties and nutritional content (Huang et al., 2010). When epidemiological studies are examined, it is noteworthy that there is a positive correlation between fruit and vegetable consumption and reduction of heart diseases, cancer types and other degenerative diseases, and optimal intakes of elements such as sodium, potassium, magnesium, calcium, manganese, copper, zinc and iodine are associated with risk factors in heart diseases contributes to the reduction of factors (Kaur and Kapoor, 2001).

Despite the changing environmental conditions, the problem of nutrion rapidly growing and world population increases the importance and value of genetic resources (Karagöz et al., 2010). It has been reported that the number of main plants consumed as food worldwide is obtained nearly 20 species, while the number of wild plants consumed as food is more than 10,000 (Yücel et al., 2012).

Turkey is very rich in terms of wild plant species due to its geographical location. It is reported that there are 11,707 plant taxono in our country and 3607 of them are endemic (Güner et al., 2012). Consumption of herbaceous plants, as vegetables is quite common and grow spontaneous in nature among the richness species of Turkey (Karagöz et al., 2010; Kibar and Temel 2015).

Considering the plant diversity of Turkey, it is known that there are many wild plants that are not yet reported in our country but are used as food. As in the world and also in Turkey benefiting from these plants is generally in the form of fresh consumption for nutrition. As in our region, in some cities, it is consumed in the form of boiled and frozen products for the winter. In addition to these, while traditionally used in the treatment of diseases in some regions, these weeds have begun to use in the raw material of many medicines in medical. Again, the importance of weeds, which are consumed as vegetables, has increased in the face of nutritional problems that arise with rapid population growth. The fact that the nutritional content of wild plants consumed as vegetables is higher than many cultivated vegetables contributed to this increase (Kibar and Temel, 2015).

According to the data of 2021 in our country, agriculture is applied on an area of 23,200 thousand hectares. Grain cultivation took the first place in 15,436 thousand hectares (66.5%) of this area, while vegetable growing areas were 784 thousand hectares (3.4%). Again, according to the data of the same year, the total amount of vegetable production in Turkey was 30,032,727 tons, and tomato was the most produced vegetable in our country with a production of 12,150,000 tons (Anonymous, 2021). When we look at the proportions of these vegetables produced in the country of this year, carrots, tomatoes, peppers, onions, zucchini (gums), cucumbers, peas (fresh) spinach, beans (fresh), leeks, eggplant, cabbage, radishes, lettuce and melons. The adequacy ratios of these vegetables are over 100% and it can be understood that there is no problem in the production of these vegetables in our country. Although these vegetables are beneficial for human health in terms of their nutritional content, it is known that intensive fertilizers and pesticides used together with the effect of intensive agriculture, which is becoming increasingly widespread, cause the accumulation of residues in the human body.

For this reason, people make their choice in food for good agriculture, organic agriculture or products that come naturally/not cultivated in nature. The nutritional values of edible herbs have led to an increase in the demand for these plants.

Edible weeds in Turkey, because of the different ecological conditions of the regions, sometimes it is possible to encounter plants that show regional adaptation, and sometimes the same plant can be grown in many regions, such as purslane. This diversity is sometimes due to the ecological conditions of the region, and sometimes it has vegetal diversity due to the appropriate ecological conditions desired by the plant.

Southeastern Anatolia Region has also become one of the regions with high potential in terms of edible wild plants. However, studies on the edible plants of the Southeastern Anatolia Region are scarcely any due to the high hilly areas of the region and the security problems of the region. While many plant diversity can be found in the mountainous and rugged areas of the region, this rate decreases in flat areas.

Since the vegetation of the Southeastern Anatolia Region is of both Mediterranean origin and Eastern origin, its plant diversity is also high. Diyarbakir and its surroundings, which are a member of this region, have a high number of weeds (vegetables) that can be eaten as vegetables due to the different ecological conditions they have. It is possible to come across many different plants, especially on the Karacadag side of the province. Since these regions have not yet entered intensive agriculture and have both cultivated plants and different edible plants, these herbs are especially brought to the domestic market by Karacadağ. Spring is the period when edible wild vegetables are most intense. With the warming of the weather, these plants show themselves, and the local people living in that region collect these products as a source of income and ensure that they reach the market. These herbs, which have become the culture of the province, are now well known by the people of the region, albeit with different names, and they bring them to their tables.

In the Southeastern Anatolia region, which has an agricultural area of 2,912 thousand hectares, vegetable cultivation is carried out on an area of 682,069 decares, of which 141,100 decares constitute the vegetable cultivation areas of Diyarbakır. (Anonymous, 2021). The most cultivated and produced vegetable in the region is the watermelon plant, which is famous for the name of the province. However, Diyarbakir, which was famous for its own genotypes in the past years, is not as intensively cultivated as it used to be because hybrid varieties dominate the market now. In addition to the intense consumption of Kenger plant (*Gundelia tournefortii* L.), which is very popular in the province, another important vegetable is Akbandır (*Ornithogalum narbonense* L.). There are hardly any houses in the province where these two plants do not enter. It has been revealed in the research results that it is consumed fresh within the same period, as well as being boiled, which is traditional preservation methods, and stored in refrigerator bags and eaten in winter. In addition to these plants, *Mentha pulegium* L. (Yarpuz), *Malva neglecta* (Ebegömeci), *Portulaca oleracea subsp. oleracea* (Semizotu), *Nasturtium officinale* R. Br. (Su teresi), *Capsella bursa-pastoris* (L.) Medik. Other edible wild plants such as (Çoban çantası), *Anchusa azurea* Miller (Guriz-Sığırdili), *Rheum ribes* L. (Işkın) took place in the markets and tables of the region. It is known that some of these plants are included in plant systematics as cultivated plants (such as semizotu, su teresi, kenger). In this study, the characteristics of some edible wild vegetables that can grow spontaneously in Diyarbakır were tried to be given, and a survey was conducted with the local people who collect and market the plant directly on the Akbandır vegetable, revealing all stages of this plant from the field to the table, and its recognition, importance, consumption potential and marketing value has been tried to be revealed. The Akbandır plant is considered as a model plant and other edible wild vegetables are matched, and it is aimed to guide comprehensive research on these plants in the future.

## MATERIALS AND METHODS

This study is based on Diyarbakır, its districts and its immediate surroundings, and wild plants that can be eaten as vegetables in these regions were chosen as the study material. It is seen that the density of these plants is high in the districts of Kayapınar, Ergani, Eğil, Dicle, Hani, Bağlar, which are the areas where plant diversity is intense, and in the region that constitutes a wide, high and rugged area known as Karacadağ in the west of the province. Due to its volcanic nature, this mountain contains fertile soils. For this reason, the population of the province's common and various edible weeds is high, especially in this area. At the end of the studies, naturally found in the province of Diyarbakir and its surroundings; *Gundelia tournefortii* L. (Kenger), *Ornithogalum narbonense* L. (Akbandır), *Mentha pulegium* L. (Yarpuz), *Malva neglecta* (Ebegömeci), *Portulaca oleracea subsp*. (Semizotu), *Nasturtium officinale* R. Br. (su teresi), *Capsella bursa-pastoris* (L.) Medik. ( çoban çantası), *Anchusa azurea* Miller (Guriz-sığırdili), *Rheum ribes* L. (ışkın) at all brief information about its features, benefits and consumption patterns is given. In the selection of these plants used in the study; The recommendations of the local people (especially since women in the region collect these plants and bring them to the markets, mainly interviews were made with women), provincial and district markets, transmitters and information gathered from literature research. With our field and survey studies, the local names of these weeds, the general structure of the plant, its leaves, flowers, roots, usage patterns of the plant were asked and the answers were noted and some photographs showing the general appearance of the plant were taken. In the survey study, which is our second study, the local people who collect these plants were asked questions about the collection method of the Akbandır plant, the parts used, the ways of use, the status of the current plant in the future and the education level of the foraging part. The survey was conducted in the area where plant material is concentrated (Kayapınar, Ergani, Hani, Karacadağ-Siverek). In addition, this survey study was carried out in April-May, when the plant material was collected. The questions asked to the farmers for the Akbandır plant were formed as follows.

A survey was conducted for the Akbandır plant, which is a weed consumed as a vegetable in Diyarbakır. The following questions were asked to the respondents.

1. Your City:
   Kayapınar( ) Hani( ) Dicle( ) Bağlar( ) Ergani()
2. Your Village:
   Oğlaklı ( ) övündüler( ) Yeşilsırt( ) Abacılar( ) Tepebeg( ) Cankatran( ) Other( )
3. Producer's age:
   15-24 ( ) 25-39 ( ) 40 54 ( ) 55-70 ( )
4. Who does the production
   Woman ( ) man ( )
5. Educational status:
   Primary school ( ) Secondary school ( ) High school ( ) University ( ) Illiterate ( )
6. Jobs …….
7. Do you cultivate Akbandır?
   Yes ( ) No ( )
8. Is Akban annual or perennial?
   1 ( ) 2 ( ) 3 ( ) Other ( )
9. How do you collect the product?
   By hand ( ) With a knife ( ) With a special tool ( ) (The name of this tool)
10. What is the collection area of the product?
    Stony ( ) Gravel ( ) Sloping ( ) Flat land ( )
11. In which soils does Akbandır grow mostly?
    In tight soils( ) Stony( ) In cultivated fields( ) Other( )
12. Is the amount of Akbandır increasing?
    Increasing ( ) Decreasing ( ) Unchanged ( )
13. How is the consumption of the product?
    Cooked ( ) Freezing ( ) Other ( )
14. What time do you harvest?

Morning ( ) noon ( ) evening ( )
15. How much do you harvest in a day?
10 kg ( ) 20 kg ( ) 40 kg ( ) Other ( )
16. When are the start and end dates of the harvest? (in months) :……
17. How do you evaluate the Akbandır that you collect?
( ) Consuming all within the family ( ) Selling most of it ( ) Selling a little ( ) Other
18. If seeds are given in a part of your field, would you consider growing Akbandır?
Yes ( ) No ( )
19.Have you ever attempted to breed Akbandır yourself?
Yes ( ) No ( )
20. Have you heard of those who tried to grow Akbandır?
Yes( ) No ( )
21. Where do you sell the product?
I sell to local markets ( ) I sell to broker myself ( )
22. How long does the product stay on the market? : …….
23.Do you sell abroad?
Yes ( ) No ( )
24. Does anyone around you earn good money from the sale of Akbandır?
Yes ( ) No ( ) Maybe ( )
25. What do you think are the quality criteria for a good Akbandır plant?: …….

*Evaluation of Data*

In the study, SSPS 17 statistical package program was used to evaluate the data obtained from the survey questions.

## RESULTS AND DISCUSSION

### Survey Made for Akbandır Plant

The following results were obtained within the scope of this research. Of the 8 surveys conducted within the scope of this research, 1 of them was conducted in Kayapınar (12.5%), 2 of them (25%) in Dicle, 2 of them in Hani (25%) and 3 of them in Bağlar. Out of 8 questionnaires, 1 was from Oğlaklı (12.5%), 2 of them were Övündüler (25%) 1 of them was Yeşilsırt (12.5%) 2 of them were Abacılar (25%) 1 of them was Tepebağ (12.5%) 1 of them was Cankatran (12.5%). Of those who participated in the 8 surveys conducted within the scope of the research;

- When the education level was examined, it was seen that 5 people graduated from primary school (62.5%) and 1 person was high school (12.5%) and 2 people were illiterate (25%).
- Examining the occupational status, it was seen that 5 people out of 8 (62.5%) were housewives, 1 person (12.5%) was a driver, and 2 people (25%) were farmers.
- To the question of how old a plant Akbandır is, 8 out of 8 people (100%) were told that it is a one-year plant.
- When the situation of how the product was collected was examined, it was seen that the product was collected by hand in 8 (100%) of them.
- When the collection area of the product is examined, it is seen that 1 of 8 people (12.5%) is stony, 2 people (25%) are sloping and 5 people (62.5%) are flat land.
- When the amount of Akbandır is gradually increasing, it is seen that 6 people out of 8 (75%) decrease and do not change in 2 people (25%).
- It has been observed that 4 (50%) of 8 people were harvested in the morning and 4 (50%) at noon.
- When the start and end dates were examined, it was seen that 8 out of 8 (100%) were made between April and May.
- When asked how do you evaluate the Akbandır you collect, it was seen that 6 people out of 8 (75%) said that they were selling all of them within the family, and 2 people (25%) said they were selling less.

- If seed is given in a part of your field, would you consider cultivating? It was seen that 2 of 8 people (25%) said yes and 6 (75%) said no.
- When the situation of those who tried to raise Akbandır was examined, it was seen that one of 8 (12.5%) people said yes and 7 people (87.5%) said no.
- When the situation where do you sell the product is examined, it is seen that 8 out of 8 (100%) say they sell to local markets.
- When asked how long the product stays on the market, 6 people (75%) of 8 said they stayed 10 days, 1 person (12.5%) stayed 7 days and 1 person (12.5%) said 15 days.
- • It was observed that 8 out of 8 people (100%) said no to the question "Do you sell them outside of Akbandırı province?"
- • It was observed that 6 people out of 8 (75%) said no and 1 person (12.5%) said yes, and 1 person (12.5%) said yes to the question "Does anyone earn good money from the sale of Akbandır?"
- • When the quality criteria of a good Akbandır plant are examined, it is seen that 4 out of 8 people (50%) are dark green and at the desired length, 3 (37.5%) are dark green and thin, and 1 (12.5%) is not carded.

As a result of the research, it has been seen that the amount of Akbandır is gradually decreasing, the market value is not high, almost all of the collected Akbandırs are consumed within the family, and they are not sold to foreign markets, and they are consumed lovingly by the local people. Any government support for Akbandır breeding and by improving the breeding conditions by subject experts, it can be ensured that people can attempt to raise Akbandır.

*Some Herbs Consumed as Vegetables in the Region*

At the end of the studies, naturally found in the province of Diyarbakir and its surroundings; *Gundelia tournefortii* L. (Kenger), *Ornithogalum narbonense* L. (Akbandır), *Mentha pulegium* L. (Yarpuz), *Malva neglecta* (Ebegömeci), *Portulaca oleracea subsp. oleracea* (Semizotu), *Nasturtium officinale* R. Br. (Suteresi), *Capsella bursa-pastoris* (L.) Medik. ( çoban çantası*), Anchusa azurea* Miller, (Guriz-Sığırdili) and *Rheum ribes* L. (Işkın). It has been determined that the taxon is consumed for medical purposes in the treatment of diseases such as food stuffing, salad, frozen winter vegetables, and sometimes stomach ailments (Kenger plant), digestive system disorders (Akbandır). The Latin names, families, local names and used parts of these plants, which are intensely found in our region, are given in Table 1.

Table 1. Weed species that can be eaten as vegetables, which are the subject of our research

| **Latin Name** | **Family** | **Local Name** | **Part Used** |
|---|---|---|---|
| *Gundelia tournefortii L.* | *Asteraceae* | Kenger | Underground parts |
| *Ornithogalum narbonense L.* | *Liliaceae* | Akbandır/Mızlak/Mezelek | Young shoots and leaves |
| *Portulaca oleracea subsp. Oleracea* | *Portulacaceae* | Semizotu | Young shoots and leaves |
| *Mentha pulegium L.* | *Lamiaceae* | Yarpuz | Leaves |
| *Malva neglecta* | *Malvaceae* | Ebegömeci | Leaves |
| *Nasturtium officinale* R. Br. | *Brassicaceae* | Suteresi | Leaves |
| *Capsella bursa-pastoris (L.)* Medik. | *Brassicaceae* | Çobançantası | Leaves |
| *Anchusa azurea* Miller | *Boraginaceae* | Güriz-Sığırdili | Fresh leaves |
| *Rheum ribes L.* | *Polygonaceae* | Işkın | Petioles |

*Gundelia tournefortii L.*(Kenger): This plant, which grows in many regions of Turkey, is known by different names in the regions where it grows; kenger, kingar, kengi grass, hook

grass, sweet gum grass, guetik grass. This plant grows spontaneously in mountainous areas in April and May in our region. Both the underground roots and the aboveground green part of this perennial and herbaceous plant are consumed in our region. The leaves of the plant, whose body is short and thick, with few branches, are leathery, whitish with veins and hairy (Konak, et al., 2017: Pirinç et al., 2014). Gum is also obtained from the condensed milk obtained from its roots and is chewed among the people for healing purposes (Konak, et al., 2018). The consumption habits in our region are as follows; Roots, which are mostly underground organs, are fried in oil, and sometimes after this process, they are fried with eggs and consumed. In addition, although it is not consumed very often, cannabis gum is obtained by drying the milk in the root. The benefits of cannabis to human health are as follows; It increases appetite, strengthens the gums, protects the stomach. In addition, eating a small amount of Kenger gum prevents diarrhea (Çakılcıoğlu et al. 2007). It is reported that this plant is prescribed for many diseases in traditional medicine (Çoruh et al. 2007, Polat et al. 2012).

*Ornithogalum narbonense* L. (Akbandır): Another plant with a high density in our region and in our province is *Ornithogalum narbonense* L., locally known as Akbandır plant. The bulb of this plant, which can grow up to 70 cm, is whitish and oval. The leaves of the plant are fleshy and 8 to 15 mm. is wide. 1 to 2 cm of flowers. It has long bracts and has 6 star-shaped white petals. This plant with hermaphrodite flower structure is a herbaceous perennial. This plant, which is more common in mountainous areas, is seen on slopes, rocks and meadows. It likes permeable and moist soil in terms of soil requirements, its density is higher in sunny and semi-shaded areas. Young and fresh plants are collected from May to early June in our region and sold in local markets. A small bundle of this plant, which is sold in bundles in the bazaars, can cost up to 7-8 TL in the Diyarbakır market, which increases women's demand for this plant and becomes a good source of income for them in a short period of time. After the fresh shoots are cleaned in general, they are finely chopped and boiled in their own juice. Then, frying in oil with onions, tomato paste and spices can be done, as well as another consumption habit in our region, boiled in oil and fried with eggs.

*Portulaca oleracea subsp. Oleracea* (Semizotu): Purslane, which is called by different names such as whistle, prawn, cleaning herb, coldness and cannabis, belongs to the family of *Portulacaceae* and is listed as one of the most used medicinal plants by the World Health Organization and the term "global panacea" has been given ( Lim and Quah, 2007, p.734). It is an annual and prefers moist and permeable soil. Spreading to a depth of 30-50 cm in the soil, purslane has a fringe root structure. This grass, which has a hermaphrodite flower structure, can grow up to 4 cm. Yellow flowers begin to open in June. Purslane is consumed fresh in our region, as well as being boiled and left to cool, then left in refrigerator bags for consumption in winter. In our city, it is very common to serve it in yoghurt and salad after it is boiled, especially in summers.

Purslane, which likes sandy and loamy soils, can be seen in almost all wetlands. Purslane is diuretic, antiseptic, antipyretic, anti-scorbutic (vitamin C deficiency disease), antispasmodic, dewormer (Yan et al., 2012, p.37), hypolipidemic, anti-aging, antioxidative and pain reliever in traditional Chinese folk medicine. (Shen et al., 2013). In addition, this plant is rich in polysaccharides, flavonoids, alkaloids, coumarins, αlinolenic and β-carotene (Xiang et al., 2005). It has hypoglycemic, hypolipidemic and insulin resistance-lowering effects due to the polyunsaturated fatty acids, flavonoids and polysaccharides it contains (El-Sayed, 2011). It is also a rich source of omega-3 fatty acids, which are used to prevent heart attacks and strengthen the immune system (Lim and Quah, 2007). It is also rich in antioxidants and contains the most palmitic, oleic and linolenic acids (Erkan, 2012).

*Mentha pulegium* L (Yarpuz): Another plant with a high density in our region is Yarpuz. This plant, which can grow up to 50 cm on average, can be easily found in the neighborhood markets. *Mentha pulegium* 50 cm. can grow. Its leaf color is lilac, its leaves are short-stalked,

0.8 to 3 cm long and 0.3 to 1 cm wide. These flowers are in hermaphrodite flower structure. It starts to be seen in our region in April-May with the warming of the weather. Consumption of this herb in our region is eaten as dried on soup, yoghurt and salad. Its fresh green form is brewed and drunk like tea, or it can be consumed by adding young leaves to salads. When consumed excessively, it can damage the liver. In many houses in our city, the individual who catches a cold is brewed and drunk with watermelon tea.

*Malva neglecta* (Ebegömeci): Ebegömeci, a perennial edible weed, prefers sandy, clayey and loamy soils. It can be seen in fields and along roadsides. The flowers of this herb, which can grow up to 40 to 120 cm, have a hermaphrodite structure. In our region, they bloom in May, June and July. The flowers, fresh leaves and stems of the plant are consumed. Its large leaves are used in wrapping and pastry mortars, its fresh leaves are boiled and its yogurt salad, rice dish and roasted are widely consumed (İnaltong, 2015). In addition, its fresh leaves are consumed raw in salads, and the leaves and shoots are consumed in soups and as boiled vegetables (Samavati and Manoochehrizade, 2013). Tea is made from the dried leaves. It is known among the people that it relieves inflammation and swelling.

Hibiscus was used by the Romans and Greeks in antiquity for its softening and laxative properties (Prudente et al., 2013). It contains phenols, flavonoids, carotenoids, tocopherols, ascorbic acid, thiamine, riboflavin, carbohydrates, tannins, Fe, Zn, K minerals in its structure; shows anti-inflammatory, antiulcerogenic and strong antioxidant properties (Guarrera and Savo, 2013). Anthocyanins obtained from hibiscus cause a decrease in total cholesterol and plasma triglyceride (Samavati and Manoochehrizade, 2013). Ebegümeci has diuretic (Gürdal and Kültür, 2013), soothing and antispasmodic effects (Barros et al., 2010b). Eating Ebegümeci is especially good for the intestines and bladder, and the soup made with its roots is good for all kinds of poisoning (Kıran, 2006, p.25). The flowers and leaves of the Ebegümeci plant are included in the composition of "cough" and "bronchial" teas as a chest softener in mouth and throat inflammations and irritating coughs (Yücel et al., 2012).

*Nasturtium officinale* R. Br. (Su teresi): It has been used as a food by humans for many years, but it is also evaluated as a medicinal plant (Lee and Newman, 1997; Stern, 1994). This plant, which likes moist and wet soil, prefers sunny areas. It is called by different names in different regions of our country, with names such as Watercress, Bitter stretching, Ratchet, Çakandura, Because, Derdime, Ispatan, Kordomot, Kerdeme, Toadspider, Water stretching, Water rush, Water mancası, Tizik, Wild cress, Gudime. The leaves of this plant, which can grow more than 50 cm, are 8 to 10 cm long. It has the characteristic of being fragrant and spicy. They spread through their stolons. This plant, which has a hermaphroditic flower structure, blooms in May, June and July in our region. The leaves can be consumed raw or cooked.

*Capsella bursa-pastoris* L. *Medik*. (Shepherd's Bag): This plant from the cruciferous family grows in many parts of our country. Çobançası, which can be grown on the roads and fields, in the fields and meadows, can be up to 50 cm in length. The leaves are small and arrow-shaped and rosette-shaped. It has four petals. This plant, which has a hermaphrodite flower structure, has small flowers that bloom in white or sometimes pink. It is eaten raw or cooked like spinach. It is also used in salads, soups, meat dishes, bulgur or rice pilaf (İnaltong, 2015). In addition, it is also drunk by brewing tea. In our province, the above-ground parts of the plant are cut and collected from April-May. It is known that kidney sands, kidney inflammation, wound healing, menstrual regulator, hemorrhoids, constipation (stuffiness), nose bleeding, relaxing properties.

*Anchusa azurea Miller* (Guriz-Sığırdili): A perennial grass, mullein likes permeable and moist soil. It occurs in meadows, fields and roadsides. This plant, which can be between 20 and 150 cm tall, begins to be seen from April-May.

*Rheum ribes* L. (Işkın): Iskın (Rheum Ribes) Iskın is a member of the *Sorrelaceae* (*Polygonaceae*) family, mostly grown in Iran, Lebanon and Eastern Turkey (Shokravi, 1997).

This plant, which is grown in temperate countries and has a long life, has eight genera and seventy species grown in Turkey (Cullen, 1966). *Rheum ribes* L. It is the only Rheum species that grows between 1800 and 2800 altitude rocky meadows of Turkey (Andinç et al., 2009). Fresh stems and leaves are consumed as vegetables (Öztürk et al., 2007). In many eastern provinces, it is eaten raw like a snack, and various dishes are made (İnaltong, 2015). The chard-like sour branches of this plant, which emerge with the onset of spring in April-May, are collected when the plant is young and sold in the markets. The branches and trunk are hairy, and the thin layer on them is peeled off, dipped in salt and eaten, and left for salads. Although on a small scale, some families are also known to boil and eat the egg along with it. However, its taste deteriorates as the stem and shoot become carded. The plant should be collected before the bud period passes before it becomes fibrous (Anonymous, 2017-1). The height of the plant can grow up to 40 cm, and there are leaves attached to the ground and parallel to the ground in the lower parts, and a leafless stem extending in the form of a rod in the middle of them (Yıldız, 2014). At the top of the plant, there are spike-shaped yellow flowers, and the outer surface of the reddish stems is hairy. The stem and young roots of the ray plant are used against diarrhea and stomach vomit, its juice is used in hemorrhoids, measles and smallpox diseases, its roots are used in the treatment of diabetes, high blood pressure, obesity, ulcer, diarrhea and as an expectorant (Öztürk et al., 2007).

## CONCLUSIONS

The edible herbs consumed as vegetables given in table 1 all of them are not herbs some of them also cultivated as cultural plants but the local consumer or farmers evaluate them as weeds or wild plants. In the region the farmers did not grow or cultivated some if these plant. Within the scope of this research, it has been tried to give information about the weeds that grow wild in the region and are not cultivated but are consumed as vegetables and to determine the region and producer profile of the Akbandır plant. The result of this research also carries the feature of preliminary research for future studies. In addition, it is thought that this study will contribute to raising the awareness of the local people, who are in a foraging position, in terms of cultivating the wild plants in their environment and protecting the rich flora, to the consumption of plants more accurately, and to the promotion of wild plants.

In order to benefit from wild plants continuously and correctly; Those who collect wild plants must be made aware, wild plants must be collected from areas that are not affected by environmental pollution, and collection processes must be done in a way that does not cause plant destruction.

The unconscious use of the scarce plant resources in the universe in order to meet the needs of the rapidly increasing world population, consumption by removing them from nature instead of ensuring the continuity of production, the acceleration of concretization, the division of lands, the use of improved varieties instead of ancestral seeds, the use of intensive pesticides cause the depletion and complete extinction of our local plant gene resources.

Another damage caused by the intense consumption of these edible resources also causes an increase in erosion. Instead of the continuity of production, it will cause the soil to remain empty, erosion and desertification will begin.

As a result, it should be known that the whole society should be made aware of both its positive structure on human health and the sustainability of these herbs that meet financial needs, and it is an inevitable necessity to cultivate these herbs for future generations.

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