Research of the Use of Wild Strawberry (Fragaria Vesca) in Gastronomy: The Case of Amasra

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Abstract

Strawberries are included in the group of grape-like fruits with high proportions of bioactive substances. Wild strawberry (Fragaria Vesca) is a small-grained, durable, tasty and fragrant strawberry species that is widely grown in the Black Sea Region of Turkey. This research is planned to determine and promote the use of wild strawberries in the Amasra Region. In this study interview technique, which is one of the qualitative research methods, was used. Interviews were held in Amasra between May 01, 2022 and May 05, 2022. 18 people who voluntarily participated in the study were included in the scope of the research. Content analysis method was used in the analysis of the data. As a result of this research, it was determined that wild strawberries were consumed as fresh fruits, jam and sherbet in the Amasra Region. Wild strawberry is a fruit that will make a significant contribution to the economy of the region both commercially and in terms of gastronomic tourism. In this context, taking part in the projects which are carried out for the development of the region will make this fruit become wide-spread. The use of wild strawberries for the promotion of the region will also be important. In addition, the inclusion of foods and drinks that are made with wild strawberries in the menus of the enterprises will provide a significant added value for the gastronomy of the region.
INTRODUCTION

Strawberries contain high levels of antioxidants, anticarcinogenic and antimutagenic substances, which are very important for health. In addition, the adaptation ability of the strawberry plant is seriously high (Serçe, 2014, p. 48). It is possible to carry out economical cultivation up to an altitude of 2000 meters in Turkey. Turkey has increased its strawberry production in the last 50 years: the production increased from 97 hundred tons to 546 thousand tons as of 2020. 90% of the strawberries produced are consumed fresh. Turkey is ranked 4th in the world for strawberry production and 12th in exports (Republic of Turkey Ministry of Agriculture and Forestry, 2021).

Bulut, Aldağ, & Madanlar (2004) conducted a study investigating the resistance of strawberry species to diseases and pests in laboratory and natural conditions in İzmir between 2000-2001. As a result of their work, it was noted that a remarkable difference in the egg productivity of the cotton red spider (Tetranychus cinnabarinus) was observed, (and) this pest lays eggs on the cultivated strawberry (Fragaria ananassa) twice as much as Fragaria Vesca, which is called the wild strawberry. With the observations made by the researchers in nature, data supporting this conclusion was reached and it was evaluated that the wild species Fragaria Vesca was a less preferred host than the culture species Fragaria Ananassa. In addition, Fragaria Vesca L. fruits are a good source of carbohydrates thanks to the sugar they contain. Along with these, the scientists also noted that this strawberry is rich in soluble dietary fiber, polyunsaturated fatty acids, especially linolenic acids and citric acid, vitamins B9 and E, and has high amounts of phenolic compounds. It was also seen that the extracts extracted from strawberries showed higher amounts of antioxidant and antibacterial activities than infusions and that they could prevent bacterial biofilm formation. Despite the lower bioactive compound content in infusions compared to other fruits, both forms were evaluated to be potentially applicable in functional foods and nutraceuticals/pharmaceutical formulations (Inês et al., 2016).

In the study on the effects of convection and freeze-drying processes on the fruit of wild strawberry Fragaria Vesca L.; convection drying was carried out on heating racks at temperatures of 25 °C, 40 °C and 60 °C, while freeze drying was carried out at a pressure of 63 Pa in the lyophilizer room at temperatures of 20 °C, 40 and 60 °C. As a result of these experiments, it was found that raising the drying temperature to 60 °C for both convection drying and freeze drying leads to a decrease in the total phenolic compound content and the antioxidant activity of dried fruits. The increase in the temperature of drying by convection reduced the weight of dried fruits; however, it was noted that the weight did not show a significant change in the freeze drying process. In terms of appearance quality, it was observed that the fruits with 60 °C freeze drying had the most brightness. The freeze-drying method was rated as the best due to the resulting color, L-ascorbic acid retention and antioxidant properties of dried fruits (Krzykowski et al., 2020).

The volatile composition of the fruit of wild strawberry differs from that of cultivated strawberry. Wild strawberry has been noted to have more sweetness, intense and fruity aroma (Wendin et al., 2019), in a research where a hundred different compounds were precisely identified, including esters, aldehydes, ketones, alcohols, terpenoids, furans and lactones; in addition, compounds in a subset called essential volatile compounds have been recorded to possibly contribute to the special aroma and the taste of wild strawberries (Urrutia et al., 2017, p. 99).

Turkey's strawberry gene resources consist of both local varieties and wild species. Local varieties are mostly cultivated due to their intense smell and taste (Koşker, Ercan & Albuz, 2018; Gündüz & Bayazit, pp. 36-43, 2017). These are; Ereğli (Zonguldak), Orman (Bolu), Osmanlı (İstanbul), Arnavutköy (İstanbul), Emiralem (İzmir) and...
Kestel (Bursa) strawberries. Among the local varieties, Ottoman, Ereğli, Arnavutköy strawberries are placed in a higher ranking in terms of taste and aroma. The fruit grains of these varieties are small and have less yield (Gündüz & Bayazit, pp. 36-43, 47, 2017).

According to Köşker, Ercan & Albuz (2018), gastronomic tourism is an important element in making differences in tourists' choices of destinations. Food and beverage culture, which is a reflection of the accumulation of historical, geographical and cultural features of the region, constitutes the identity of its gastronomy. The gastronomic identity of a region differentiates that region from its competitors and provides a competitive advantage in the destination selection of the tourists. In addition, by creating a unique perception of the place, it offers its visitors the opportunity to taste local products, foods and drinks. In this way, it adds value to other touristic products in the region and contributes to the development of the region's economy and increases its recognition. Wild strawberry is a species that grows in a limited time and in a limited area, which differs from other strawberry species with its taste and aroma. Thanks to these features, it is considered a special product that can be used to attract the attention of gastro-tourists to the region.

Amasra is a port city that has been used for centuries and it is in a region visited by people of various nationalities and beliefs that makes the cuisine of the region very rich. Wild strawberry is one of the special products that enriching Amasra cuisine. However, this distinct cuisine of Amasra has not been not sufficiently highlighted or promoted. This study is accepted in terms of gastronomic tourism, which is one of the most effective ways to attract people to a region as of today. In this context, it is evaluated that it will contribute to the promotion of Amasra and the development of its economy in two ways. The first and one of the most effective ways is to use social media, which has the power to change the purchasing habits of consumers (Şener & Yücel, 2020). By attracting gastro-tourists and foodies to the region the revenue of the small business including restaurants, cafes, street vendors and hotels will increase. Thus, Amasra will be recognized more thanks to the promotion and visibility of the region on social media. The second way is to draw the attention of the big investors like five star hotels and juice companies to Amasra. The opening of five-star hotels will not only be effective in the preference of high-income tourists in the region, but also contribute to the execution of all-season tourism activities in Amasra. Both the opening new hotels and juice companies will also create new job opportunities for local residents.

Figure 1. Wild strawberry jam and fresh wild strawberries
Method

This research was planned to determine the use of wild strawberry in the Amasra Region and to promote it afterwards. Qualitative research technique was used in this research. Qualitative research is a systematic approach used to understand the qualities or basic nature of a phenomenon in a given context by asking ‘why’ and ‘how’ questions (Kıral, 2020, pp. 172-173; Brantlinger et al., 2005, p. 196). This approach is a set of processes that include methods of defining related terms, collecting, analyzing, interpreting and deriving data in order to understand the subject (Merriam, 2018, pp. 13-14). Qualitative research allows researchers to ask open-ended questions about events, while asking additional questions to benefit extensively from the participant's knowledge and experience. In addition to these, it is both a creative and a dynamic approach that aims to discover the attitudes and behaviors of the participants (Kıral, 2020, pp. 172-173; Meriam, 2018, p. 16).

Sources (Koşker, Ercan & Albuz, 2018; Wendin et al., 2019) in the literature were used to create questions to be used in the research. As a result of these researches, a semi-structured interview form consisting of 11 questions was created. In addition, three academicians working in the field of gastronomy were consulted about the questions and their opinions were obtained. After the pilot study conducted in the Amasra Region, the number of questions was limited to 6. In the selection of the sample, maximum diversity sampling from the purposeful sampling method was used. The ethics committee permission document required for the collection of the data used in this research was obtained from the Başkent University Ethics Committee with the decision number E-62310886-605.99-121802 dated April 22, 2022. The research data was obtained from producers, local residents and sellers who knew about wild strawberries and these people expressed their opinions. The research was carried out in the form of face-to-face interviews between May 01, 2022 and May 05, 2022. Within the scope of the research, the following questions were asked to the participants:

- Can you tell us about wild strawberries?
- Can you give information about the usage of the amount obtained?
- What are the types of food prepared with wild strawberries?
- In your opinion, are wild berries known enough?
- In your opinion, what can be done for the promotion of wild strawberries?
- In terms of gastronomic tourism, can the wild strawberry be considered a product used in the promotion of the region?

The research was carried out with 18 participants. During the interviews, it was adhered to the questionnaire. However, additional questions were asked where it was necessary to obtain extra information, thus allowing the participant to make additional contributions. After the responses of the participants became repetitive, three more people were interviewed and the interviews were terminated when new information could not be obtained. All interviews were recorded in audio and video form to prevent problems that may arise regarding the validity and reliability of the research. These records were stored in a digital environment and direct quotations were made from the answers given by the participants during the transfer of the answers to the questions.

Results

Demographic information about the participants is given in Table 1.
Table 1. Demographic Information of the Participants

<table>
<thead>
<tr>
<th>Participant</th>
<th>Age</th>
<th>Gender</th>
<th>Education</th>
<th>Task</th>
<th>Place of duty</th>
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Findings of the Demographic Information

All of the participants were born in Amasra. It was observed that 14 of the participants in the research were women and 4 of them were men. Two of the participants (K1, K2) were hoteliers, seven (K3, K4, K5, K6, K16, K17, K18) were local residents, five (K7, K8, K9, K10, K11) were shopkeepers, K12 was a chef, K13 was a teacher, K14 was a municipal official and K15 was a farmer. It was obtained that the educational status of the participants varies from primary school to undergraduate. Their age ranges between 34 and 78.

Findings on the Condition of Wild Strawberries in the Region

1. Can you give information about wild strawberries?

K1, K2, K3, K4, K5, K6, K7, K8, K9, K10, K11, K16, K18; "... a small and fragrant strawberry that grows spontaneously in the mountains... When collected, it is eaten fresh or jammed. Its life span is not very long..."

K17; “It was not a well-known fruit in Çaycuma, where I was born. I found out when I came to Amasra. The smell is delicious.”

K12; “Wild strawberries grow on their own. Although the production in our region is not significant in economic terms, it is collected by women who produce local products and use wild strawberries in jam making. Though it cannot be very sweet, it has a dominant feature in terms of aroma and smell. Due to the fact that its structure has a tiny form, it is used for making jam. I haven't heard of any research on the ingredients, but I think the nutrients are higher in amount than regular strawberries."

K13; "It grows in the mountains. When I was a kid, every time I went to the mountains with my mother, she would collect it for us and we would eat it. This is how I was introduced to this fruit. We would collect it from the branch and eat it directly. I do not remember enough to describe the taste right now, but everything was so good from my mother's hand. The smell is very beautiful. Unfortunately, I do not know how much the production rate is. I think it's a tough product to collect."

K15; "... I grow it in my garden as well. I planted the seedlings I bought from the mountain in my garden and
from there I collect the strawberries. I start harvesting products in May."

2. Can you give information about the usage of the amount obtained?

K1, K2, K3, K4, K5, K6, K7, K8, K9, K10, K11, K13, K16, K17, and K18; "... I know that jam is only made and consumed fresh."

K12; "It is currently widely used to make jam. Since it has a dominant odor, it can be considered as an aromatizer. By drying, the shelf life is extended and the strawberries can be used in the production of hoşaf (compote). It can be used to decorate the cake by making a confectionery. It can be grounded into powder and consumed as tea."

3. What are the types of food prepared with wild strawberries?

K1, K2, K3, K4, K5, K6, K7, K8, K9, K10, K11, K12, K13, K14, and K15; "It is expected to release its juice by depositing it in sugar and it is boiled and jams are made."

In addition, K12; "Water is boiled, fresh reyhan (purple basil) leaves, dried wild strawberries and cinnamon sticks are added to it and infused. Strained and then lemon and sugar are added into it, thus strawberry reyhan sherbet is made."

Findings for the Awareness of Wild Strawberries

4. In your opinion, are wild berries known enough?

K1 and K2; "... it is known in and around Amasra, but very few people know about them outside of here."

K3, K4, K5, K6, K7, K8, K9, K10, K11, K13, K15, K16, K17, and K18; "Absolutely not."

K14; "Unfortunately, it is unknown. No studies have been done on wild strawberries either... we opened a sales place opposite our municipality to promote and sell local products."

K12; "... it is known in our region, but it can be introduced more and spread nationally and internationally."

5. In your opinion, what can be done for the promotion of wild strawberries?

K12; "It can be used in pastry, it can be consumed with muesli or oats, like blueberries, which are very much liked. It can be an alternative to lemon or other fruits to sweeten the water."

K13; "First of all, it is necessary to develop the areas of use. Nutritional values should be determined by content analysis. Alternative storage methods should be developed for an extended shelf life."

6. In terms of gastronomic tourism, can the wild strawberry be considered a product used in the promotion of the region?

K1 and K2; "During periods when wild strawberries are growing, nature trips with groups can be arranged and wild strawberry picking activities can be done in the mountains."

K13; "It will be very valuable. The point to be considered is that I think it should be presented as a product that can appeal to everyone's taste. Unfortunately, misrepresentation can cause locals to plunder mountains. Moreover; since it is difficult to collect, the method of cutting and collecting the branches, although it is not a sustainable method, can be chosen. Local people should be awaked for a sustainable harvest."
Conclusion and Recommendations

Wild strawberry is known as a small-grained species that grows widely in the north of Turkey, especially in the Black Sea Region. It is a durable, tasty and fragrant strawberry fruit. Because wild strawberry is not a cultural species, grows on its own in the mountains and there is no research on the subject, information about the amount of its production per year could not be reached. A farmer conveyed the information that if desired, the seedling of this strawberry could be propagated by planting in the gardens. Wild strawberries in the Amasra Region, it is consumed as fresh fruit and jam or offered for sale. It was also stated by the participants that strawberry reyhan sherbet was made. In the interviews with the sellers, it was also learned that the price of a kilogram in 2022 is 200 Turkish Liras, which is 10 times more expensive than the cultural type fragaria ananassa. It was also stated by the participants that wild strawberries were not recognized in other regions and that local and foreign tourists learned about this strawberry when they came to the Amasra Region.

In addition, the participants in the research stated that wild strawberries could be used in pastry by making confectionery. In addition to these, they stated that it can be used in hoşaf (compote), dried and breakfast cereal mixtures and teas. For this purpose, they also think that it would be useful to develop different storage methods to extend the shelf life. For this purpose, it is stated that nature trips or tours can be organized and benefits can be obtained in terms of gastronomic tourism. The participants of the research think that it would be more beneficial to carry out these activities after the local people are well informed. Otherwise, they think that this product, which is difficult to collect, can be harvested in the wrong way and that this mistake can endanger the strawberry species.

As a result of the literature research on wild strawberries and the interviews in the Amasra Region, it is thought that this fruit can be a product that will contribute to both commercial and gastronomic tourism. In this context, it is thought that the following suggestions will be useful:

- First of all, starting from the district municipalities, the annual production amount of the product should be determined.
- Considering the amount of production, if necessary, the farmer should be supported financially and thus production should be increased.
- The sustainability of wild strawberries should be ensured.
- Promotion, training and information activities should be carried out regarding the contributions of the product to the local economy.
- Wild strawberries should be depicted and sold not only on the market, but also through hotels, restaurants and cafes in the region.
- For this purpose, it should be served at the breakfast services of hotels and restaurants.
- It should be used in products such as ice cream, chocolate, confectionery, Turkish delight, soufflé and new dishes made with wild strawberries should be developed and put in menus.
- In order to store the product for a longer time, industrial facilities should be planted, where the freeze dry method described by some researchers, which is considered to be more efficient than convection drying, can be applied.
- In order to improve economic opportunities, support projects should be applied by the municipality and producers should be trained on these issues.
Participation in fairs should be ensured with products produced from wild strawberries, and their products should be constantly promoted in social media and the attention of the public should be attracted.

In the next stage after the production amount meets the needs of the district, it is necessary to enter the niche product market by negotiating with the producers and suppliers of pastry products that distribute and sell throughout Turkey.

Negotiations should be conducted and opportunities should be provided for five-star hotels and fruit juice companies to invest in the region.

There are a limited number of studies on wild strawberries in the international and Turkish literature. These studies are not intended to evaluate the product in terms of commercial or gastronomic tourism. However, the study of Krzykowski et al. (2020) shows that freeze dry method is more efficient way to extend the shelf life of strawberry while keeping its taste, aroma and shape. It is also deduced from Köşker, Ercan & Albuz (2018) work that wild strawberry could be used as a special product to create gastronomic identity of Amasra. It is thought that this research will contribute to the relevant literature as a study that deals with wild strawberries in both areas. Due to the fact that it is outside the scope of this research, issues such as morphological and anatomical properties of wild strawberry, phenolic compounds and bioactive properties and nutritional values were not mentioned. For this reason, future research can be developed to cover these issues.

Declaration

The authors of this article have equally contributed to this article and they have no conflict of interest to declare nor have they received any funding from any company. The ethics committee permission document required for the collection of the data used in this research was obtained from the Başkent University Ethics Committee with the decision number E-62310886-605.99-121802 dated April 22, 2022.

REFERENCES


T.C. Tarım ve Orman Bakanlığı Strateji Geliştirme Başkanlığı Tarım Ürünleri Piyasaları Çilek Raporu, Haziran 2021. https://arastirma.tarimorman.gov.tr/tepge/Belgeler/PDF%20Tar%C4%B1m%20%C3%9Cr%C3%BCnleri%20Piyasalar%C4%B1/2021-Haziran%20Tar%C4%B1m%20%C3%9Cr%C3%BCnleri%20Raporu%C3%87ilek,%20Haziran-2021.%20Tar%C4%B1m%20%C3%9Cr%C3%BCnleri%20Piyasa%20Raporu,%20TEPGE.pdf


EK. 1

RESEARCH OF THE USE OF WILD STRAWBERRY (FRAGARIA VESCA): THE CASE OF AMASRA
INTERVIEW FORM

Dear Expert Participant,

The research is for academic purposes only and it is aimed to use the questions as an article in a peer-reviewed journal or in the form of academic papers after content analysis. In the study where participation is voluntary, it is not possible to share the data with third parties or to use it for a commercial purpose. Thank you very much for your valuable opinions, suggestions and contributions. Best regards.

Researchers
Instructor Servet Kazım Güney
Baskent University Department of Gastronomy and Culinary Arts
Assoc. Prof. Menekşe Cömert
Ankara Hacı Bayram Veli University Department of Gastronomy and Culinary Arts

PART I: DEMOGRAPHIC INFORMATION
Please fill in the blanks in the following statements with the answers that are appropriate for you, and please indicate the one that is suitable for you from the boxes opposite the expressions by marking them in (X) format.

| 1. Name, Surname? | .......................................................... |
| 3. Education? | Primary School | High School | Associate Degree | Bachelor’s | Master Degree | Doctorate + |

PART II: THE CONDITION OF WILD STRAWBERRIES IN THE REGION
1. Can you tell us about wild strawberries?
2. Can you give information about the usage of the amount obtained?
3. What are the foods prepared with wild strawberries?

PART III: THE AWARENESS OF WILD STRAWBERRIES
4. In your opinion, are wild berries known enough?
5. In your opinion, what can be done for the promotion of wild strawberries?
6. In terms of gastronomic tourism, can the wild strawberry be considered a product used in the promotion of the region?
Ek-1: Etki Kurul İzni

Evrak Tarih ve Sayısı: 22.04.2022-121802

BAŞKENT ÜNİVERSİTESİ
Académie Départementale Coordinatörü

Sayı : E-62310886-605.99-121802
Konu : Bilimsel Çalışmalar Hk.

1993

GÜZEL SANATLAR TASARIM VE MİMARLIK FAKÜLTESİ
DEKANLIĞINA

İlgi : 11.04.2022 tarih ve 118858 sayılı yazar.

Fakültniz Gastronomi ve Mutfaq Sanatları Bölümü öğretim elemanı, Öğretim Görevlisi Servet Kazım Güney'in 2 adet çalışma sonuca değerlendirilmiş ve bilgilerimize ekte sunulmuştur.

Prof. Dr. M. Abdulkadir VAROĞLU
Kurul Başkanı

Ek: Değerlendirme Formu
Ek-1: Etik Kurul İzni (devamı)

İlgili Makama


Başkent Üniversitesi Sosyal ve Beşeri Bilimler ve Sanat Araştırma Kurulu

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<th>Ad, Soyad</th>
<th>Değerlendirme</th>
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Ek-1: Etik Kurul İzni (devamı)


Prof. Dr. Özcan Yaşar, Güzel Sanatlar Tasarım ve Mimarlık Fakültesi Gastronomi ve Mutfak Sanatları Bölümü öğretim elemanı, Öğr. Gör. Servet Kazım Güney'in çalışmalarının uygun uygun olduğu düşüncelerini iletmislerdir.