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# Traditional Turnip Meals of Konya

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**Abstract**

Belonging to the Brassicaceae family grown in Europe, Asia and America, turnip (Brassica rapa subsp. rapa) commonly named as salgam, shalgam, shaljam, is a very important vegetable. It has a lot of positive effects as an antioxidant, antidiabetic, antimicrobial, antitumor, and antiinflammatory. There are many recipes related to turnips in Turkish Cuisine. Some traditional turnip dishes belong to the food group of soups, dolmas (stuffed), sarmas (rolling), pilavs (pilaf), böreks (pastry), salads, and juice. This research has been conducted to determine how turnip meals are made in Konya in Turkey. In this study, the qualitative research method was used. Interviews were held with 32 participants selected by the purposive sampling method. At the end of this study, there were a lot of meals made from turnip and at least 18 meals were found. They should take their deserved place in the menus in restaurants. Turnip dishes can be used as a gastronomic element. Addition to, turnip is a valuable vegetable in terms of human nutrition.

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## INTRODUCTION

The *Brassicaceae* family includes some plants, which are vegetables and oilseeds of worldwide importance. *Brassica rapa subsp. rapa*, commonly named as salgam, shalgam, shaljam, a member of The *Brassicaceae* family (Sheikh et al., 2020), is now widely cultivated, as a vegetable and oilseed source, for its enlarged fleshy roots, tender growing tops, forage, and oilseed (Paul et al., 2019; Sheikh et al., 2020). The turnip image is given in Figure 1.

**Figure 1.** Turnip (Photo: Abdullah Badem).

Turnip is one of the oldest cultivated vegetables, has been eaten as a vegetable since the prehistoric times, and has medicinal values such as a traditional therapeutic agent (Fernandes et al., 2007; Paul et al., 2019; Sheikh et al., 2020).

*Brassica rapa* is almost completely edible with its leaves, inflorescence, root, stem, and seed (Samec & Salopek-Sondi, 2019). The use of turnip varies from culture to culture from region to region, and many kinds of dishes are prepared by raw, boiling cooking, boiling or steaming the leaves, or roots. It is also consumed by adding different types of meat together with other herbs and vegetables, and pickled turnip is made in some regions (Azam et al., 2013; Fernandes et al., 2007).

With this study, it is aimed to give information about the turnip meals that belong to Konya (Turkish) Cuisine. The detailed way of making turnip dishes is given.

### Composition of Turnip

Turnip contains calcium, magnesium, iron and zinc, vitamin $B_1$, vitamin $B_2$, dietary fiber, and bioactive compounds. It has a low-fat content and its low calorie makes it a good source for nutrition (Azam et al., 2013; Sheikh et al., 2020; Yadav & Dubey, 2017). The chemical composition of the turnip is given in Table 1.

The volatile and bioactive compounds of turnip have medicinal effects (Sheikh et al., 2020). It affects human health as antioxidant, nephroprotective, hepatoprotective, antidiabetic, antimicrobial, antitumor, anticancer, analgesic activities, anti-inflammatory, etc. (Belyakova et al., 2020; El-makawy et al., 2020; Paul et al., 2019, 2020; Sheikh et al., 2020). Anthocyanins have control over diabetics (Zhang & Jing, 2020).

There is a negative relationship between the respiration rate of vegetables and their storage time, and vegetables with a high respiratory rate such as peas, asparagus deteriorate rapidly, while vegetables such as turnips with slow respiratory rates can be stored longer (Chakraborty & Chattopadhyay, 2018). Turnips can be stored for 4–5 months at $0^0$C, %95–98 relative humidity (Pal et al., 2018). Turnips have a long shelf-life, longer than potatos (Lepage, 1967). Turnips are vegetables similar to garlics, onions, cabbages and radishes that emit a strong odor and should not be stored with odor-absorbing products (Chakraborty & Chattopadhyay, 2018). Insects stay away from turnips due

to their high volatile substance content (Paul et al., 2019), and also turnips provide a natural defense against pathogens, herbivores, and weeds (Anjum et al., 2012).

**Table 1.** The chemical composition of turnip (adapted from (Azam et al., 2013; Sheikh et al., 2020; Yadav & Dubey, 2017).

| Parameter (g/100 g) | Turnip root | Turnip leaves |
|---|---|---|
| Energy (Kcal) | 28,12 | 21 |
| Water (g) | 91.28 | 93.13 |
| Crude protein (g) | 0.90 | 2,46 |
| Crude fat (g) | 0.10 | 0.19 |
| Carbohydrate (g) | 6,43 | 3,39/9,4 |
| Crude fiber (g) | 1,8 | 2,4 |
| Total titratable acidity | 0,23 | |
| Ash | 14,62 | |
| Phosphorus -P (µg) | 27 | 24 |
| Potassium -K(µg) | 191 | 82 |
| Calcium -Ca (µg) | 30 | 114 |
| Magnesium -Mg (µg) | 11 | 18 |
| Iron -Fe (µg) | 0,3 | 1,63 |
| Sodium -Na (µg) | 67 | 18 |
| Zinc -Zn (µg) | 0.27 | 0.16 |
| Vitamin A (IU) | 0.0 | 6108 |
| Vitamin B1 (mg) | 0.040 | 0.044 |
| Vitamin B2 (mg) | 0.30 | 0.88 |
| Vitamin B3 (mg) | 0.400 | 0.388 |
| Vitamin C (mg) | 21 | 25,8/180 |
| Vitamin B6 (mg) | 0.90 | 0.074 |
| Folate DFE (mg) | 15 | 41 |
| Tocopherol (mg) | 0.30 | 0.00 |
| Phylloquinone (mg) | 0.1 | 0.00 |

**Turnip Dishes**

Many kinds of dishes are prepared with turnips all over the world, especially from the root, using them raw, with cooking, boiling or steaming methods (Azam et al., 2013; Fernandes et al., 2007). There is a rich variety of dishes in Turkish cuisine that has been going on since the Seljuk and Ottoman cuisine. There are various types of dishes such as soups, appetizers, meat dishes, offal dishes, vegetable and fruit dishes, rice dishes, pastries, drinks (Badem, 2020a). It is stated that "*kalye* meal" entered Turkish cuisine between the years 1040-1299 (Halıcı, 2015b). Therefore, it can be assumed that other turnip dishes have survived from at least the same period. In some books where the recipes of Seljuk-Ottoman cuisine dishes are given, dishes made with turnip consist of the following: turnip *dolma* (stuffed) (Akkor, 2014; Aktürk, 2005; Halıcı, 2015b; Kut & Kut, 2015), fried turnip with yogurt (Aktürk, 2005; Işın, 2018, 2019; Kut & Kut, 2015; Soysal, 2007), roasted turnip (Işın, 2019), turnip *musakka* (moussaka) (Halıcı, 2015b), turnip *bastısı* (Halıcı, 2015b), turnip *aşı* (meal) (Işın, 2019), vegetable soup, spring soup (Işın, 2019), turnip garnish (Işın, 2018), turnip pan (Işın, 2018) and pickled turnip (Akkor, M, 2014b; Aktürk, 2005; Işın, 2019; Kut & Kut, 2015). There is also widely consumed turnip juice in Turkey (Erten and Tanguler, 2012; Tangüler et al., 2020; Tulun et al., 2019).

## Method

In this study, qualitative research methods were used. In semi-structured interviews, it is stated that the sample size is between 5-25 people (Saunders et al., 2012). For the selection of the people to be interviewed, 3 districts of Konya (Bozkır, Hadim, and Taşkent) in Turkey, where turnip dishes and turnip cultivation are common, were determined as the universe. In the first stage, the village headmen of these 3 districts (39 of 88 headmen) were interviewed and it was determined whether turnip cultivation and turnip meals were in their villages, and the people to be interviewed were determined by the purposive sampling method. In the second stage, 32 volunteer participants were interviewed in December-2020. As suggested in the literature (Sundqvist et al., 2020), due to the covid-19 outbreak, the participants were given the opportunity to choose how they want the interview to be done, 30-60 minutes as e-interview/interview and with the permission of the participants, voice and/or video has been recorded. Interviews were terminated by repeating the answers and reaching the saturation point (Baldwin, 2017; Patton, 2014). The recorded interviews were transcribed. The collected data were transcribed, edited, and commented on in the results and discussion section. In order to ensure reliability in qualitative research methods, it is necessary to specify how the data is analysed (Kozak, 2018, p. 124). Strategies used to ensure validity and reliability in qualitative research are expressed as "long-term interaction, depth-oriented data collection, diversification, expert review, participant confirmation, detailed description, purposeful sampling, consistency review, and confirmation review". The descriptive analysis method was preferred as a data processing approach. In this study, depth-oriented data collection, expert review, participant confirmation and purposive sampling were applied for validity and reliability. The questions used in the study was taken from a previous meal culture inquiry (Badem & Akturfan, 2020). The aforementioned questions were formed with the suitability of 7 academicians who teach in the field of gastronomy at three universities. The content validity ratio for the related questions was calculated as (+1). The limitation of the study is that the researched dishes were made in some districts of Konya. The ethics committee permission document required to collect the data used in this study was obtained from the Ethics Committee of Karamanoğlu Mehmetbey University with the date 26.04.2021 and the number 50 decision / number.

## Results and Discussion

Turnip cultivation is carried out in Konya (especially in Bozkır, Hadim, and Taşkent district). In this research, the following question was asked to determine the turnip dishes and the information obtained was given below. The demographic information of the participants is given in Table 2.

**Table 2.** Demographic information of the participants.

| Demographic and descriptive characteristics | Frequency (n) | Ratio (%) |
|---|---|---|
| Gender | | |
| Male | 16 | 50,00 |
| Female | 16 | 50,00 |
| Age | | |
| 31-40 | 1 | 3,13 |
| 41-50 | 10 | 31,25 |
| 51-60 | 7 | 21,88 |
| 61-70 | 7 | 21,88 |
| ≥71 | 7 | 21,88 |

The question of "Are there any meals made from turnip in your region? If so what are they?" was asked to the participants and the answers are given in Table 3. The following recipes were created from the data obtained, and photos of the dishes prepared in accordance with the recipe were presented.

**Şalgam pilavı/Turnip pilaff**

There are many types of pilaf, one of the common basic dishes of Turkish cuisine. It is made with rice, butter/vegetable oil, water, salt, and seasoning if desired. *Bulgur* is also widely used instead of rice (Akkor, M, 2014a). *Bulgur* is a cereal product obtained from *Triticum durum* a type of wheat, which has been produced since the beginning of Anatolian civilization.

**Table 3.** Turnip dishes that the participants know how to cook.

| Participant | Gender* | Birthdate | Şalgamlı pilav/Turnip pilaf | Boiled turnip | Roasted turnip | Şalgam aşı/ Turnip meal | Turnip soups | Turnip börek/katmer | Şalgam dolması-Stuffed turnip | Calla meal | Turnip salads | Turnip puree/garnitur | Other turnip meals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P1 | F | 1938 | x | x | x | | x | x | | x | | | |
| P2 | F | 1942 | x | x | x | | x | x | | x | | | |
| P3 | F | 1945 | x | | x | | x | x | | x | | | |
| P4 | F | 1959 | x | x | x | x | | x | | x | x | | x |
| P5 | F | 1955 | x | x | x | | | x | | x | x | | |
| P6 | F | 1956 | x | x | x | | | x | | x | x | | |
| P7 | F | 1945 | x | x | | | x | x | | x | | | |
| P8 | F | 1967 | x | | x | x | | | | x | | | |
| P9 | F | 1968 | x | x | x | | | | | x | x | | x |
| P10 | M | 1979 | x | x | x | x | | | | x | x | | x |
| P11 | M | 1962 | x | x | | x | | | | x | x | | x |
| P12 | M | 1955 | x | x | x | | | | | x | x | | x |
| P13 | F | 1950 | | x | | | | | | x | | | |
| P14 | F | 1950 | | | x | | | x | | x | x | | x |
| P15 | M | 1977 | | x | | | | | | x | | | |
| P16 | F | 1984 | | | | | | | | x | | | |
| P17 | M | 1972 | | | | | | | | x | | | |
| P18 | M | 1962 | x | | | | | | | x | | | |
| P19 | M | 1954 | x | | | | | | | x | | | |
| P20 | M | 1978 | x | | | x | | | | | | | |
| P21 | M | 1968 | x | | x | | | | | | | | |
| P22 | M | 1968 | x | | | | | | | | | x | |
| P23 | F | 1974 | x | x | | | | | | | x | x | |
| P24 | F | 1952 | x | | x | | x | | | | | | |
| P25 | M | 1974 | x | x | x | x | | x | x | | | | x |
| P26 | M | 1977 | | x | x | x | | | | | x | | x |
| P27 | M | 1972 | x | | x | | x | | | | | | x |
| P28 | F | 1948 | x | | | | | | x | | | | x |
| P29 | M | 1973 | x | x | | x | x | | | | x | | x |
| P30 | M | 1976 | x | | | | x | | | | | | x |
| P31 | F | 1968 | x | x | x | | x | | x | | x | x | x |
| P32 | M | 1953 | x | x | | | | | x | | | | |

If the content of rice is to be enriched, usually chicken, chickpeas, peas, barley, vegetables such as potatoes,

tomatoes, and green pepper, as well as flavoring materials such as coriander, and saffron are used (Akin, 2015; Akkor, M, 2014a; Algar, 1991). "Bulgur is commercially manufactured from durum wheat (*Triticum durum ssp*.) through boiling in water until whole grain gelatinises, drying under sunlight or in drying-towers about 12% moisture content, slightly debranning, breaking with mill to different particle sizes, sifting and classifying" (Erbaş et al., 2015). *Ayran*, yoghurt diluted with water, "*cacık*; ayran added cucumber slices" and compote are often served alongside pilafs. Nowadays, pilaffs are also served with roasted meat and vegetable dish (Akin, 2015).

To make turnip pilaf, melt 2 tablespoons of butter in a pan. Add 2 medium-sized finely chopped onions, 4 small turnips cut into cubes and roast together, then add half a kilogram of bulgur. Optionally, salt and pepper are added. Approximately 4-5 glasses of water is added to on top of the bulgur and cooked. It is usually served with pickled vegetables (Figure 2), pickled hot peppers, or compote (P1-P9,P11,P12, P18-P24,P27-P29,P31). Some of them add tomato paste to butter (P4,P7-P9), dried tomato/dried pepper (P2,P23), green or dried tomato (P3), green pepper, tomato (P4), minced meat/roasted meat (P1,P2,P4,P6,P8,P9,P18-P21) can also be added. The turnip pilaf image is given in Figure 2.

**Figure 2.** Şalgam pilavı-Turnip pilaf (back left: vegetable pickled, back right: vinegar) (Photo: Abdullah Badem).

**Boiled Turnip (galle)**

Small turnips are washed all over including leaves, roots, etc. the upper and lower parts are cleaned. It is boiled in water for 20-25 minutes in a pot over medium heat, then the outside of the turnips are peeled. It is served by adding spices such as salt and pepper if desired (P1,P2,P4,P5,P7,P9-P13,P15,P23,P26,P29,P31,P32). It is more appropriate to boil the little ones as they cook quickly (P4). The boiled turnip image is given in Figure 3.

**Figure 3**. Boiled turnip (Photo: Abdullah Badem).

**Roasted turnip**

2 tablespoons of butter is melted in a pan and 1 medium onion chopped on top to roast. 2-3 medium size finely

chopped turnips are added over the roasted onions. The dish is cooked with the lid of the pot closed, stirring occasionally. It is served by adding the desired spices such as pepper, black pepper and mint (P1-P6,P8,P9,P12,P14,P21,P24,P26,P31). It is served hot for breakfast, or as an appetizer along the main course (P5). Turnip's outer shell or roots are dried, tastes like mushrooms, and consumed in the form of roasted turnip (P12,P25-P27,P31). The roasted turnip image is given in Figure 4.

**Figure 4.** Roasted turnip (Photo: Abdullah Badem).

**Şalgam Aşı-Turnip Meal**

Turnip meal is cooked like a potato meal (P4,P8,P10,P20,P26,P29). To make a turnip meal / potato meal, firstly, 2 tablespoons of vegetable oil or butter is heated in a pan, 1-2 tablespoons of tomato paste, and 1 medium size chopped onion are roasted. The turnip/potato cut into cubes is added, and water is added over the turnips/potatoes and left to cook. In a different method, it is cooked as a vegetable dish with cauliflower and leeks (P10). If desired, 2-3 tablespoons of roasted meat can be added to both dishes. Turnip is similar to both radish and potato in terms of taste and texture, it is very nutritious and can be used instead of potatoes (P4). The turnip meal image is given in Figure 5.

It has been determined that turnip meal is made in Bitlis in the Eastern Anatolia Region (Bayat, 2020:6).

**Turnip Soups**

**Turnip Bulgur Soup**

It is obtained by making şalgam pilavı/turnip pilaf more watered. There is some water in the plate like soup (P2,P3,P7,P24,P29). Turnip bulgur soup image is given in Figure 6.

**Figure 5.** Turnip meal (Photo: Abdullah Badem).

**Figure 6.** Turnip bulgur soup (1), milky soup (2), Turnip soup with diluted floury watered (3) (Photo: Abdullah Badem).

**Şalgam böreği/katmeri - Turnip börek/katmer**

Börek is indispensable for Turkish cuisine and can be defined as rolled, stuffed or layered pastry in which cheese, spinach, minced meat, or edible herbs, can be incorporated into the *yufka*- rolled bread (Algar, 1991; Basman & Köksel, 2001; Dale & Sivriolu, 2015). There are varieties of rolled bread used in *börek* making (Algar, 1991). Some böreks made in Turkish Cuisine; *cigar börek, spinach börek, paçanga (bacon börek), katmer* (a type of börek with varieties), *su böreği* (Akkor, M., 2014; Dale & Sivriolu, 2015). Börek types are given in Figure 7.1. *Su böreği* (1), *peynir-cheese böreği* (2), *sigara-cigar böreği* (3), *kapalı ıspanaklı- spinach pide* (4), *patatesli- potato açık pide* (5), *kıvrım böreği* (6).

**Milky soup**

5 medium turnips are chopped into 1-1.5 cm cube sizes beforehand. They are taken into a pot, 1.5 glasses of boiled yarma (cracked wheat), 1 glass of water, and 1 liter of milk are added. When it is cooked, butter and chili peppers can be added (P27, P31). The milky soup image is given in Figure 6.

**Unlu şalgalı bulamaç -Turnip soup with diluted floury watered**

3 medium turnips that are peeled and cut into 1 cm cubes are boiled in water in a pot. 1 glass of flour is whipped with 2 glasses of water (400 ml). They are mixed by pouring the flour water over the turnips (P31). Turnip soup with diluted floury watered image is given in Figure 6.

In order to make turnip börek, 2 glasses of flour, 2 glasses of water, 1 teaspoon of salt are mixed in a bowl, and are kneaded in the consistency of an earlobe. The dough is rolled (Figure 8.2.1) and rested a little. While the dough is resting, the filling is prepared: 1 large turnip is peeled and cleaned. It is cut into thin strips. In order to cook the turnip well in the dough, it must be prepared in thin strips. 1 medium onion is chopped. The turnips, onion, salt and chopped peppers are mixed. The rolled doughs are opened in the size of a plate (Figure 8.2.1) and some filling material is put on (Figure 8.2.2). The flat dough is folded from the middle and the dough is closed (Figure 8.2.3). If desired, it can be cooked on a tin plate, or in a pan over medium heat. It is served hot, by brushing the desired amount of butter (Figure 8.2.4). It can be eaten at all repast (P1-P7, P14). Cheese can be added into the filling material (P6) and a little olive oil can be poured (P2). The dough can also be prepared with yeast (P2). If the dough filling material is cooked, it has a sweetish taste which is undesired from people (P2). Turnip börek/katmer image is given in Figure 7.2.

**Figure 7.1.** Su böreği (1), peynir-cheese böreği (2), sigara-cigar böreği (3), kapalı ıspanaklı- spinach pide (4), patatesli- potato açık pide (5), kıvrım böreği (6). (Photo: Abdullah Badem).

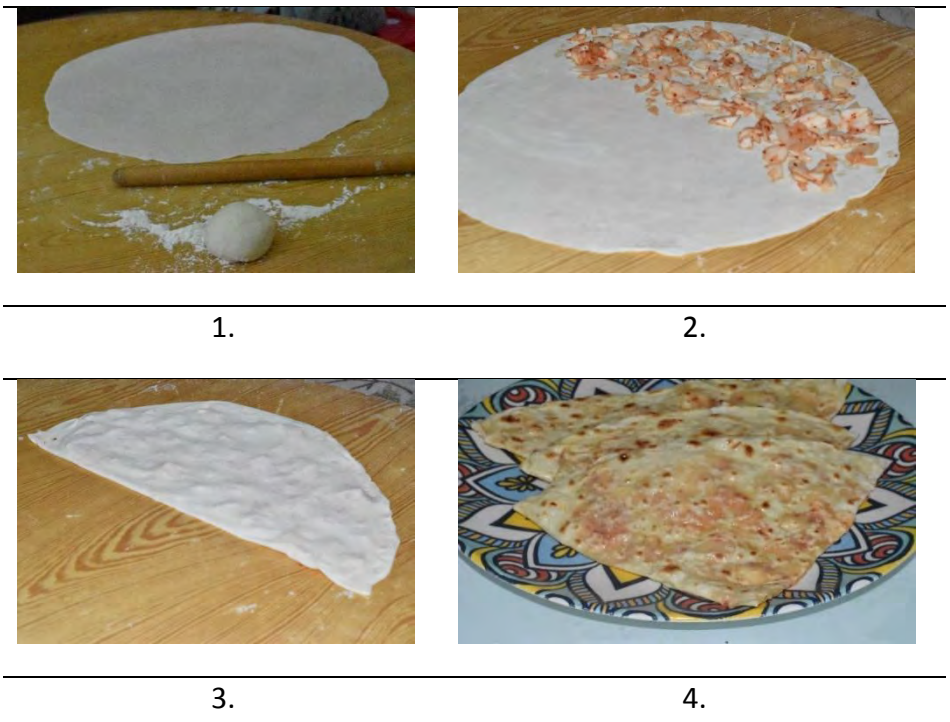


**Figure 7.2.** Turnip börek/katmer (Photo: Abdullah Badem).

**Turnip Dolmas (stuffed)**

One of the important food groups of Turkish cuisine, dolma (stuffed vegetable) is prepared using mostly peppers, eggplant, and zucchini, melon, or dried vegetables (tomato, pepper, quince, chard, celery), sometimes lamb ribs and intestines. Dolma's filling material is prepared with the use of many different materials such as rice, bulgur, nuts, spices, and vegetables (Akkor, M., 2014; Algar, 1991; Dale & Sivriolu, 2015; Weichselbaum et al., 2005). Dolmas consumed with yogurt (Weichselbaum et al., 2005). Dolma types images are given in Figure 8.1.

**Zeytinyağlı Şalgam Dolması-Stuffed Turnip with Olive Oil**

Turnips are cleaned and the top cover is removed properly. The inside of the turnips are carved. To make 5 medium-sized turnip dolmas, roast 500 grams of bulgur, 2 tablespoons of olive oil, 1 medium onion, and 1 tablespoon of tomato paste. Spices such as red pepper, salt, mint, cumin, black pepper are added. It is cooked by adding half a tea glass of water (30-50 ml). Dolma filling material cooks quickly, it should not be overcooked. The prepared material is filled into the carved turnips and its lids are closed. Dolmas are laid in the pot, and the piece of turnip carved from the turnip inside is placed between the turnip dolmas. Add 2 glasses of mixture with tomato paste, olive oil, and water. The mixture should not cover the turnip dolmas. Cook at average temperature and serve hot or cold (P28, P31).

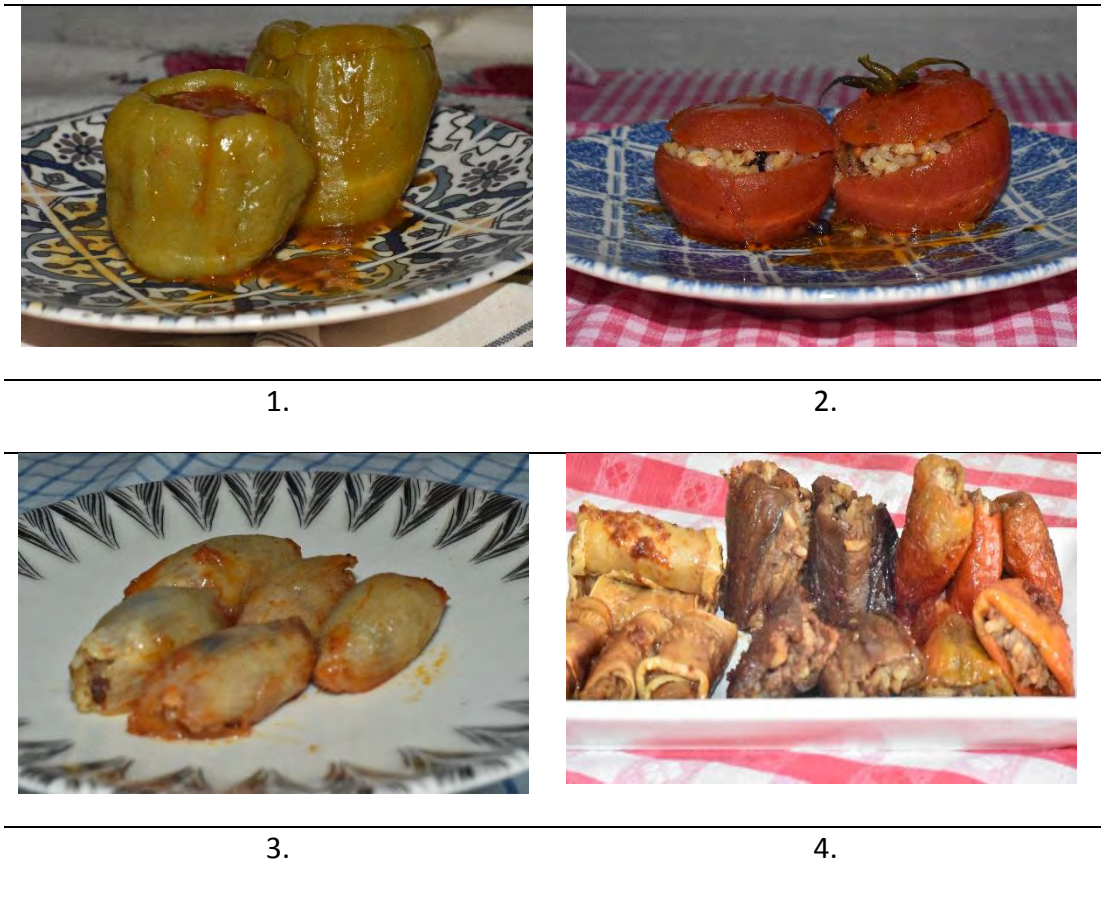


**Figure 8.1.** Green pepper dolma (1), Tomato dolma (2), Onion dolma (3), Dried vegetable dolmas (4 - left: pumpkin, center: eggplant, right: pepper) (Photo: Abdullah Badem).

**Kavurmalı şalgam dolması - Stuffed turnip with cubed meat**

Stuffed turnip with roasted cubed meat is made using roasted cubed meat/minced meat. For this, add 1 medium-sized onion, desired spices, 200-300 grams of meat, ½ glass of rice and 1 tablespoon of tomato paste into the pot and roast. It is made like stuffed turnip with olive oil. Animal tallows used to be found in kitchens. More delicious dolmas can be made by using tallow oil (P25,P31). Stuffed turnip with cubed meat image is given in Figure 8.2.

**Figure 8.2.** Stuffed turnip with cubed meat (Photo: Abdullah Badem).

It is seen that turnip dolma is also on the table of the Mevlevi Order. It is stated that turnip is more delicious by traditionally cooking it in a casserole or oven, and it can be served with yogurt (Soysal, 2007). The founder of the Mevlevi Order, Hazreti Mevlana, said that "Wouldn't it be nice if you could cook turnips in a gold pot?"(Halıcı, 2015a). He stated that turnip is eaten with love.

It has been determined that stuffed turnip is made in Erzurum in the Eastern Anatolia Region, similar to the Konya region (Bayat, 2020).

**Turnip sarma (rolling)**

*Sarma* (rolling) is a meal prepared with rice, or bulgur etc. stuffed in grape leaves that can be consumed hot, or cold. In some books, it is also mentioned as a kind of dolma-stuffed (grape-leaf dolma) (Akkor, M., 2014; Algar, 1991; Dale & Sivriolu, 2015). There are many types of sarma, some of them; *çiçek sarma* (Aegean stuffed zucchini flowers), *pırasa sarma* (leeks stuffed with chicken and chestnuts), *ördek sarma* (duck and silverbeet parcels) (Dale & Sivriolu, 2015) *yaprak sarma* (vine leaf rolling), *lahana sarma* (cabbage rolling). Some sarma types are given in Figure 9.1.

For the turnip sarma, 5 medium-sized turnips are washed. Without peeling the outside of the turnip, only part of the head is cut and cut in a thin round at 0.5 mm thickness. It is boiled until it softens, then it is taken from the water. For the filling of sarma, 4 tablespoons of rice, 500 grams of minced meat, 2 medium onions, 1 tablespoon of tomato paste, 2 teaspoons of salt, 1 teaspoon of black pepper, 2 teaspoons of red pepper, 1 teaspoon of dried basil, ½ glass of water is mixed. Filling material is put in boiled turnips, and wrapped in the thickness of a finger.

1. 2.

**Figure 9.1.** Yaprak sarma- vine leaf rolling (1), lahana sarma- cabbage rolling (2) (Photo: Abdullah Badem).

Thus, the sarma shape is formed. Roast 2 tablespoons of olive oil and ½ tablespoons of tomato paste in a pot, and lay sarmas in the pan. The sarma stone can be closed for weight on the sarmas to prevent sarmas from opening. It is cooked by adding enough water to cover the wraps and can be served with yogurt (P4). Turnip sarma image is given in Figure 9.2.

**Figure 9.2.** Turnip sarma (Photo: Abdullah Badem).

**Pezikli aş –Pilaf with turnip leaves**

5-6 turnip leaves (*pezik*) are boiled in water for 3-5 minutes in a pot. In a saucepan, melt 2 tablespoons of vegetable oil or 2 tablespoons of butter. Add 1 medium size finely chopped onion, and roast. Add 1 tablespoon tomato paste, 1 tablespoon pepper paste, and salt and roast. Then, add 1.5 glasses of bulgur and ½ glass of boiled chickpeas, and roast again. After the roasting process, the desired spices and 3.5 glasses of water are added. When the cooking time is over, boiled turnip leaves are added. It is served hot after cooking (P28). Pilaf with turnip leaves image is given in Figure 10.

**Figure 10.** Pilaf with turnip leaves (Photo: Abdullah Badem).

**Calla meal**

Turnips are washed, peeled, and cut into cubes for making calla. Butter/other oil is put in the pan. Add tomato paste, finely chopped onion and turnips, respectively, and roast. Previously, in another pot, cubed meat/boned meat, and chickpeas are boiled with some water. Add all the boiling ingredients, hot water, salt, and chili pepper into the roasting pot. The meal is cooked for 30-35 minutes (until the turnips soften). (P1-P4,P6-P9,P11,P12,P15,P16). Calla meal image is given in Figure 11.

**Figure 11**. Calla meal (Photo: Abdullah Badem).

**Turnip salads**

Grate the desired amount of turnips, carrots, onions, or cut them into thin strips and mix. Add lemon/mountain plum sauce/black mulberry sauce homemade vinegar, olive oil and parsley (P4-P6,P12,P31), if desired, 3-5 olives are added to salad. In another recipe, the turnips are grated, and cheese is crumbled and served for breakfast (P26). Turnips can be cut into thin slices, and eaten with meals or with fruits (P2,P4,P5,P9-P11,P29,P31). It can also be prepared by slicing the turnip leaves to make a salad alone or mixed with green vegetables such as lettuce (P4,P5,P14). Salad types are given in Figure 12.

**Turnip puree**

Turnip puree is prepared with turnips, chickpeas, vegetable oil, mountain plum (P22) or by roasting the mix prepared with boiled turnips, onions, chili peppers, and salt. The puree should be consumed fresh (P23). Puree types are given in Figure 13.

1. 2.

**Figure 12.** Turnip salad (1), Turnip leaves salad (2) (Photo: Abdullah Badem).

1. 2.

**Figure 13.** Turnip puree with chickpea (1), turnip puree (2) (Photo: Abdullah Badem).

**Turnip garnish**

Turnips are placed in a pot, 1 teaspoon of sugar and 1 teaspoon of salt are added and boiled, the water is drained, outside of turnip is peeled, and cut into 1-2 cm thickness. It can be eaten as an appetizer (P31).

**Dried turnip**

Turnips are washed, the peel is peeled off. Turnips are put on a rope and hung on a high place to dry. They can be shaped slightly thicker than chips. They can be eaten by boiling like mushrooms or by roasting (P12,P25-P27,P31). Turnip rind, or root is dried, it tastes like mushrooms, and consumed as roasted turnip (P12,P25-P27,P31). The dried turnip image is given in Figure 14.

Dried turnip is also made in Erzurum province. Turnip is dried with the "*çırtma*; cut into thin long strips" method, and then it is used in the production of "*şalgam çırtması yemeği* ; dried turnip meal" (Akoğul & Aksakallı Bayraktar, 2020).

**Figure 14.** Dried turnip (Photo: Abdullah Badem).

**Şalgamlı pancarlı doldurma-Stuffed with turnip and sugar beet**

First of all, 2 tablespoons of oil and/or 1 tablespoon of tallow is put into the pot. 200-300 grams of sugar beet is chopped in the shape of chips. 3-4 pieces of medium size turnips are chopped flat and finely. 1 medium onion is chopped finely and everything is roasted together. 1 glass of bulgur is added on top of it. If desired, spices can be added. Finally enough water to cover all material is added. Although this meal is not as watery as a soup, it should be a little watery meal. The sugar beet flavor makes the meal neither sweet nor salty, it is a different meal. It can be served with homemade vinegar (P31). The stuffed with turnip and sugar beet image is given in Figure 15.

**Figure 15.** Stuffed with turnip and sugar beet (Photo: Abdullah Badem).

**Şalgam bastırması**

Melt 1 tablespoon of tallow in the pan. Roast 200 grams of oily roasted cubed meat, 1 finely chopped medium onion and 1 glass of bulgur, and add seasonings, if desired. Peel 4 medium turnips, and cut turnips in half into a circle shape. Lay a row of turnips under a pot, pour some prepared filling material on it, lay another layer of turnip, and pour some prepared filling material on it again. With this method, 3-4 layers are made. It is cooked like turnip pilaf by adding enough water to cover it (P14).

**Ayranlı tarhana aşı (meal)**

*Tarhana* is a very old food of Turks, and tarhana soup is also ancient. Tarhana is a type of food made by fermenting and drying yogurt, flour, sometimes wheat and some vegetable-herb-spice mixture. There are twenty types of tarhana produced in Turkey (Badem, 2020b).

*Ayranlı tarhana aşı* is made with churned ayran, bulgur/cracked wheat, turnip and/or sugar beets. *Yarma*-cracked wheat is poured into the heated ayran, 2 medium-sized beets, and 2 medium-sized turnips are chopped and added. Then, the mix is boiled until it thickens, spread onto a plate, or a clean place in a thin form to the size of a hand on sunny days. When you want to cook a tarhana meal-soup, these tarhanas are used. They can also be consumed as crispy chips alone (P9,P30).

**Turnip juice**

In addition to the turnip meals that have been identified in this study, turnip juice is widely produced in Turkey. In the production of turnip juice, which is a fermented beverage made with purple carrot, turnip, and if desired, bulgur flour, sour paste are used. Turnip juice is produced in Turkey's provinces, such as Adana, Mersin, Gaziantep, Hatay, Kahramanmaraş and Osmaniye. (Tulun et al., 2019).

Many dishes are made from turnip in Turkish Cuisine. Turnip has been used in meals since the period of Seljuk Cuisine. It is determined that the materials used in the recipes are slightly different, and some turnip meal names are different.

**Conclusion**

While Turks migrated from Central Asia to Anatolia and the societies they interacted with in Anatolia, Turkish Cuisine became one of the three richest cuisines in the world. Modern Turkish cuisine was born with Seljuk-Ottoman cuisine. There are many kinds of dishes such as soups, meat dishes, pilafs, stuffed vegetables, böreks, fruit-vegetable

meals, and desserts, inherited from they. There are many examples of each food group mentioned. Furthermore, there are a lot of turnip dish examples for these groups such as turnip soups, turnip pilaf, roasted turnip, turnip meal, turnip börek/katmer, stuffed turnip, turnip rolling, calla meal; turnip meal with meat, turnip salads, garniturs and other turnip meals. There were a lot of meals made from turnip and at least 18 meals were found in Konya.

Turnip is an excellent vegetable in terms of human nutrition. It has a lot of positive effects as an antioxidant, nephroprotective, hepatoprotective, antidiabetic, antimicrobial, antitumor, anticancer, analgesic activities, and anti-inflammatory. Turnip contains mineral substances (calcium, magnesium, iron and zinc), vitamins (especially thiamine-vitamin $B_1$, riboflavin-vitamin $B_2$) and bioactive compounds that are important for human health. In addition, due to the low fat content of turnip, its low calorie makes it a good source for nutrition. Because of the fact that it is necessary to consume a lot and determine the nutritional values of turnip dishes prepared with different cooking techniques. Moreover, turnip dishes can be included in restaurants menu, and can be thought as an gastronomik element. Turnip should be introduced with its use in new recipes, and the use of this vegetable, which is important for health, should be increased. Like turnip dishes, important dishes of Turkish cuisine should be promoted in the international arena. Vegetable dishes made from turnips should be given importance as well as other dishes that have an important place in Turkish cuisine.

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## REFERENCES

Akin, E. (2015). *Essential Turkish Cuisine, 200 recipes for small plates and family meals*. Abrams publishing.

Akkor, M., Ö. (2014). *Ottoman cuisine, a rich culinary tradition*. Blue Dome Press.

Akkor, M, Ö. (2014a). *Practical recipes in turkish cuisine*. Blue Dome Press.

Akkor, M, Ö. (2014b). *Selçuklu mutfağı*. Alfa Yayıncılık.

Akkor, Y, E. (2014). *Gelenekten evrensele osmanlı mutfağı*. Alfa Yayıncılık.

Akoğul, E., & Aksakallı Bayraktar, Z. (2020). Investigation of winter preparations in Erzurum kitchen culture. *Atatürk Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, 24*, 1331–1345.

Aktürk, A. İ. (2005). *Osmanlı mutfağı- türabi efendi*. Dönence Yayınları.

Algar, A. . (1991). *Classical turkish cooking, traditional turkish food fort the american kitchen*. Harper Collins Publishers.

Anjum, N. A., Gill, S. S., Ahmad, I., Pacheco, M., Duarte, A. C., Umar, S., Khan, N. A., & Pereira, M. E. (2012). *The plant family brassicaceae: An introduction*. https://doi.org/10.1007/978-94-007-3913-0_1

Azam, A., Khan, I., Mahmood, A., & Hameed, A. (2013). Yield, chemical composition and nutritional quality responses of carrot, radish and turnip to elevated atmospheric carbon dioxide. *Journal of the Science of Food and Agriculture*, *93*(13), 3237–3244. https://doi.org/10.1002/jsfa.6165

Badem, A. (2020a). Geographical indication helvas in Turkey. *International Journal of English Literature and Social Sciences*, *5*(6), 2252–2262. https://doi.org/10.22161/ijels.56.63

Badem, A. (2020b). Tarhana, a very old traditional fermented cereal turkish food. *Of the International E-Conference on Advances in Engineering, Technology and Management*, *May*, 8–13. https://doi.org/10.15224/978-1-63248-188-7-12

Badem, A., & Akturfan, M. (2020). Yöresel bir çorba: Arabaşı (arap aşı, ara aşı). In M. S. Küçüktığlı, Y. Seçim, M. M. Adabalı, & M. Yılmaz (Eds.), *Anadolu Mutfak Kültüründen Esintiler*. Konya Büyükşehir Belediyesi Kültür Yayınları.

Baldwin, W. (2017). The transference of asian hospitality through food: chef's inspirations taken from asian cuisines to capture the essence of asian culture and hospitality. *International Journal of Gastronomy and Food Science*, *8*(January), 7–13. https://doi.org/10.1016/j.ijgfs.2017.01.002

Basman, A., & Köksel, H. (2001). Effects of barley flour and wheat bran supplementation on the properties and composition of Turkish flat bread, yufka. *European Food Research and Technology*, *212*(2), 198–202. https://doi.org/10.1007/s002170000241

Bayat, G. (2020). *Traditional Dishes Consumed in The Eastern Anatolian Region Of Turkey*. Academic Works of Livre de Lyon.

Belyakova, T., Morozova, O., Antonceva, E., & Zabodalova, L. (2020). Perspective processing of turnip root (Brassica rapa) as a source of sulforafan. *E3S Web of Conferences*, *164*. https://doi.org/10.1051/e3sconf/202016406028

Chakraborty, I., & Chattopadhyay, A. (2018). Pre- and postharvest losses in vegetables. In B. Singh, S. Singh, & T. K. Koley (Eds.), *Advances in Postharvest Technologies of Vegetable Crops*. Apple Academic Press Inc.

Dale, D., & Sivriolu, S. (2015). *Anatolia, adventures in turkish cooking*. Murdock Books.

El-makawy, A. I., Ibrahim, F. M., Mabrouk, D. M., Abdel-Aziem, S. H., Sharaf, H. A., & Ramadan, M. F. (2020). Efficiency of turnip bioactive lipids in treating osteoporosis through activation of Osterix and suppression of Cathepsin K and TNF-α signaling in rats. *Environmental Science and Pollution Research*, *27*(17), 20950–20961. https://doi.org/10.1007/s11356-020-08540-7

Erbaş, M., Aykın, E., Arslan, S., & Durak, A. N. (2015). Adsorption behaviour of bulgur. *Food Chemistry*, *195*, 87–90. https://doi.org/10.1016/j.foodchem.2015.06.050

Erten, H., & Tanguler, H. (2012). Shalgam (şalgam). In Y. H. Hui & E. Ö. Evranuz (Eds.), *Handbook of Plant-Based Fermented Food and Beverage Fermentation Technology* (p. 790). CRC Press.

Fernandes, F., Valentão, P., Sousa, C., Pereira, J. A., Seabra, R. M., & Andrade, P. B. (2007). Chemical and antioxidative assessment of dietary turnip (brassica rapa var. rapa L.). *Food Chemistry*, *105*(3), 1003–1010. https://doi.org/10.1016/j.foodchem.2007.04.063

Halıcı, N. (2015a). *Selçuklu dönemi mutfağı*. Selçuklu Belediyesi Yayınları.

Halıcı, N. (2015b). *Türk mutfağı*. Oğlak Yayınları.

Işın, P. M. (2018). *Mehmed reşad, fenn-i tabâhat 1340-1341 (aşçılık bilimi 1921-1923).* Kitap Yayınevi.

Işın, P. M. (2019). *Aşçıbaşı: Bir osmanlı subayının yemek kitabı-mahmut nedim bin tosun* (4.baskı.). Yapı Kredi Yayınları.

Kozak, M. (2018). *Bilimsel araştırma: Tasarım, yazım ve yayım ilkeleri*. Detay Yayıncılık.

Kut, G., & Kut, T. (2015). *Melceü't-tabbahin, aşçıların sığınağı, mehmed kamil.* Türkiye Yazma Eserler Kurumu Başkanlığı Yayınları.

Lepage, M. (1967). Identification and composition of turnip root lipids. *Lipids*, *2*(3), 244–250. https://doi.org/10.1007/BF02532563

Pal, R. K., Koley, T. K., & Sudhir, S. (2018). Strategies for low‐temperature storage of vegetables. In B. Singh, S. Singh, & T. K. Koley (Eds.), *Advances in Postharvest Technologies of Vegetable Crops*. Apple Academic Press Inc.

Patton, M. (2014). *Qualitative research & evaluation methods: Integrating theory and practice.* Sage publications.

Paul, S., Geng, C. A., Yang, T. H., Yang, Y. P., & Chen, J. J. (2019). Phytochemical and health-beneficial progress of turnip (brassica rapa). *Journal of Food Science*, *84*(1), 19–30. https://doi.org/10.1111/1750-3841.14417

Paul, S., Zhang, X., Yang, Y., & Geng, C. (2020). Chemical constituents from turnip and their effects on α-glucosidase. *Phyton*, *89*(1), 131–136. https://doi.org/10.32604/phyton.2020.08328

Samec, D., & Salopek-Sondi, B. (2019). Cruciferous (brassicaceae) vegetables. In *Nonvitamin and Nonmineral Nutritional Supplements* (pp. 195–202). https://doi.org/10.1016/B978-0-12-812491-8.00027-8

Saunders, M., Lewis, P., & Thornhill, A. (2012). *Research methods for business students* (6th Editio). Pearson Education Limited.

Sheikh, M. A., Anjum, N., Gull, A., & Saini, C. S. (2020). Turnip. In G. A. Nayik & A. Gull (Eds.), *Antioxidants in*

*Vegetables and Nuts - Properties and Health Benefits*. Springer Nature Ltd. https://doi.org/10.1007/978-981-15-7470-2

Soysal, S. (2007). *Derviş sofraları, tasavvufta yeme içme kültürü ve sofra adabı*. Doğan Kitap.

Sundqvist, J., Walter, U., & Hörnell, A. (2020). Meal identity as practice - Towards an understanding of business travellers' meal practices. *International Journal of Gastronomy and Food Science*, *22*(February). https://doi.org/10.1016/j.ijgfs.2020.100237

Tangüler, H., Dinç, S. Ö., & Beylikci, S. C. (2020). Problems , suggestions and last trends related to salgam beverage which is traditional product of Turkey. *Turkish Journal of Agriculture - Food Science and Technology*, *8*(6), 1266–1271. https://doi.org/https://doi.org/10.24925/turjaf.v8i6.1266-1271.3266

Tulun, Ş., Şimşek, İ., Bahadır, T., & Çelebi, H. (2019). Investigation of removal of anthocyanin in turnip juice wastewater by using different adsorbents. *SN Applied Sciences*, *1*(9). https://doi.org/10.1007/s42452-019-1019-x

Weichselbaum, E., Benelam, B., & Soares Costa, H. (2005). *Synthesis report no 6: traditional foods in europe*. 54–57. http://www.eurofir.net/temp/E...lspFoodsspinspEuropehs4hs.pdf

Yadav, K., & Dubey, R. P. (2017). Management of micronutrient deficiencies in adolescent girls : An interventional approach. *Plant Archives*, *17*(2), 973–976.

Zhang, N., & Jing, P. (2020). Anthocyanins in brassicaceae: composition, stability, bioavailability, and potential health benefits. *Critical Reviews in Food Science and Nutrition*, *0*(0), 1–15. https://doi.org/10.1080/10408398.2020.1852170