SUSTAINABILITY OF GASTRONOMIC PRODUCT AS A CULTURAL HERITAGE ELEMENT: ROASTED CHICKPEA "*LEBLEBİ*" IN TÜRKIYE

Saadet Pınar Temizkan* & Burak Çıtak**

Abstract

Roasted chickpeas are a healthy and traditional snack consumed in Turkey from the past to the present. In addition, roasted chickpeas contribute positively to consumption across all age groups, thanks to their protein, carbohydrate, and mineral content, as well as their long shelf life and variety. However, the production of this traditional product, which holds an important place in Çorum's gastronomic heritage, has decreased significantly. Therefore, the primary aim of this study is to preserve the traditional production processes of Çorum roasted chickpea within the scope of intangible cultural heritage by recording it with information received from real masters, to ensure its sustainability by transferring it to future generations. Within this scope, chickpeas have been considered a gastronomic heritage element of cultural heritage and examined in the context of tourism. In addition, the study compared traditional and modern production. The analysis of the collected data revealed that the production process in both methods consists of 14 steps: Raw material supply, chickpea sifting- classification- heating (1st heating, 2nd heating, 3rd heating)- resting- soaking- re-classification of chickpeas- shell removal- chickpea sifting- chickpea sizing (classification)- chickpea resting (bagging) and speckling (roasting). In addition, the results show that gastronomic heritage plays a central role not only in preserving local cultural identity, but also in enhancing a destination's tourist appeal and contributing to sustainable development goals).

Keywords: Roasted Chickpea; Sustainability; Cultural Heritage; Traditional Food; Türkiye.

SUSTENTABILIDADE DO PRODUTO GASTRONOMIA COMO ELEMENTO DO PATRIMÔNIO CULTURAL: GRÃO-DE-BICO ASSADO "*LEBLEBİ*" NA TÜRKIYE

Resumo

O grão-de-bico torrado é um lanche saudável e tradicional consumido na Turquia desde os tempos antigos até hoje. Além disso, o grão-de-bico torrado contribui positivamente para o consumo em todas as faixas etárias, graças ao seu teor de proteínas, carboidratos e minerais, bem como à sua longa vida útil e à diversidade de opções. No entanto, observa-se que a produção deste produto tradicional, que ocupa lugar importante no patrimônio gastronômico de Çorum, diminuiu significativamente. Portanto, o objetivo principal deste estudo é preservar os processos tradicionais de produção do grão-de-bico torrado de Çorum no âmbito do patrimônio cultural imaterial, registrá-los com base em informações obtidas de verdadeiros mestres, para garantir sua sustentabilidade e transferi-los às gerações futuras. Nesse âmbito, o grão-de-bico foi considerado um elemento do patrimônio gastronômico, parte do patrimônio cultural, e examinado no contexto do turismo. Além disso, o estudo comparou a produção tradicional e a moderna. A análise dos dados coletados revelou que o processo de produção em ambos os métodos consiste em 14 etapas: Fornecimento da matéria-prima, peneiração do grão-de-bico, classificação, aquecimento (1.º aquecimento, 2.º aquecimento, 3.º aquecimento), repouso, imersão, reclassificação do grão-de-bico, remoção da casca, peneiração do grão-de-bico, calibração do grão-de-bico (classificação), repouso do grão-de-bico (ensacamento) e salpicos (torrefação). Além disso, os resultados mostram que o patrimônio gastronômico desempenha um papel central não apenas na preservação da identidade cultural local, mas também no aumento do apelo turístico de um destino e na contribuição para os objetivos de desenvolvimento sustentável.

Palavras-chave: Grão-de-bico assado; Sustentabilidade; Patrimônio cultural; Comida tradicional; Türkiye

SOSTENIBILIDAD DEL PRODUCTO GASTRONÓMICO COMO ELEMENTO DE PATRIMONIO CULTURAL: GARBANZOS ASADOS "*LEBLEBİ*" EN TÜRKIYE

Resumen/é

Los garbanzos tostados son un aperitivo tradicional y saludable que se consumen en Turquía desde tiempos inmemoriales. Además, los garbanzos tostados contribuyen positivamente al consumo de todos los grupos de edad, gracias a su contenido en proteínas, carbohidratos y minerales, así como a su larga vida útil y diversidad. Sin embargo, se observa que la producción de este producto tradicional, que ocupa un lugar importante en el patrimonio gastronómico de Çorum, ha disminuido significativamente. Por lo tanto, el objetivo principal de este estudio es preservar los procesos de producción tradicionales de los garbanzos tostados de Çorum en el ámbito del patrimonio cultural inmaterial, registrándolos con la información obtenida de los maestros auténticos, a fin de garantizar su sostenibilidad y transmitirlos a las generaciones futuras. En este contexto, los garbanzos se han considerado un elemento del patrimonio gastronómico dentro del patrimonio cultural y se han examinado en el marco del turismo. Además, en el estudio se ha comparado la producción tradicional con la moderna. El análisis de los datos recopilados reveló que el proceso de producción en ambos métodos consta de 14 pasos: Suministro de materia prima, cribado de los garbanzos, clasificación, calentamiento (1.º calentamiento, 2.º calentamiento, 3.º calentamiento), reposo, remojo, reclasificación de los garbanzos, eliminación de la cáscara, cribado de los garbanzos, clasificación por tamaño, reposo de los garbanzos (ensacado) y salpicado (tostado). Además, los resultados muestran que el patrimonio gastronómico desempeña un papel fundamental no solo en la preservación de la identidad cultural local, sino también en la mejora del atractivo turístico de un destino y en la contribución a los objetivos de desarrollo sostenible.

Palabras clave: Garbanzos asados; Sostenibilidad; Patrimonio cultural; Comida tradicional; Türkiye.

HOW TO CITE: Pınar Temizkan, S., & Çıtak, B. (2026). Sustentabilidade do Produto Gastronomia como Elemento do Patrimônio Cultural: Grão-De-Bico Assado "Leblebi" Na Türkiye. *Anais Brasileiros de Estudos Turísticos - ABET, v. 16,* n. 1 (Edição Regular), 1 – 12, Jan./ Dez. Retrieved from: https://periodicos.ufjf.br/index.php/abet/article/view/47139/version/46684
DOI: https://doi.org/10.5281/zenodo.18062626

1 INTRODUCTION

The concept of cultural heritage is defined as "all kinds of works made by people that have a physical existence and are inherited from the past and are desired to be inherited to the future for various reasons, and the values belonging to the society" (Can, 2009).

Cultural heritage elements are classified by UNESCO as either tangible or intangible. It is evident that gastronomic values are included among the elements of intangible cultural

* Ph.D of Tourism Management (Gazi University, 2010). Master in Tourism and Hotel Management (Mustafa Kemal University, 2005). Bachelor's Degree in Tourism and Hotel Management College, Guidance (Erciyes University, 2001). Professor Dr. at Faculty of Tourism at Eskisehir Osmangazi University. Also Dean of the Faculty. CV: https://avesis.ogu.edu.tr/sptemizkan ORCİD: https://orcid.org/0000-0002-8200-9564; Email: sptemizkan@ogu.edu.tr
** Ph.D education is currently continuing in Gastronomy and Culinary Art. Master in Gastronomy and Culinary Art (Afyon Kocatepe University, 2022). Bachelor's Degree in Tourism Management (Nevsehir Hacı Bektaş Veli University, 2014). Lecturer at Vocational School, Bilecik Şeyh Edebali University. CV: https://avesis.bilecik.edu.tr/burak.citak; ORCID: https://orcid.org/0000-0002-1679-1631; E-mail: burak.citak@bilecik.edu.tr (Corresponding Author).

heritage. Therefore, factors such as the production and presentation of many local foods, depending on the diversity of food and beverage culture, are evaluated within the scope of cultural heritage (Türkay & Genç, 2019).

Different social classes, sects, and religious beliefs, along with climate, geography, and the balance of flora and fauna, effectively shape a society's food culture (Özgen, 2015). These elements take different forms at every stage, from the production of food and beverage products to their consumption, and enable the formation of local cuisines belonging to societies. Culinary culture, which has been formed over many years, is seen as a way for societies to express themselves (Türkay & Genç, 2019).

Studies show that national cuisine and gastronomic products support sustainable tourism and are highly effective in attracting tourists to destinations (Okumuş, Okumuş, & McKercher, 2007). In this context, it is very important to promote and further increase the attractiveness of roasted chickpea, which has a deep-rooted history in Turkey but whose traditional production in Çorum, in particular, has decreased considerably and is at risk of extinction, both in terms of the sustainability of the culinary culture and especially in terms of sustainable gastronomy tourism.

The study makes important contributions at this point. When examining studies related to the preservation and sustainability of gastronomic heritage, for example, Çetin, Çetin, and Gün (2025) have examined the cultural value and chemical properties of Jaja cheese, which is unique to Turkey.

The study also provides valuable insights into the preservation of cultural heritage in rural areas of Turkey, regional development strategies, and economic diversification through the commercialization of traditional dairy products. Similarly, the Mısır (2025) study examined the socio-cultural and gastronomic value of Ardahan Kavılca wheat in the context of local product discovery and sustainability.

Legumes hold a significant place in daily nutrition worldwide due to their valuable nutritional content. Among these, one of the most important legumes is chickpeas. Chickpeas are a valuable legume grown and consumed in many parts of the world. As a functional food, chickpeas have garnered significant attention in many countries due to the increasing demand for healthy foods (Köksel et al., 1998; Özbey and Görgülü, 2016).

In terms of global production volume, chickpeas rank third among legumes produced for culinary purposes, following beans and peas. Chickpeas are generally cultivated in India, North Africa, the Middle East, South America, Australia, and Turkey. In Turkey, chickpeas are one of the most widely cultivated legumes in terms of cultivation area and annual production (Sağlam and Seydim, 2017; Özaktan, 2021).

In Turkey, chickpeas are primarily consumed as a culinary ingredient, with consumption patterns depending on the culture of the regions where they are grown (Özaktan, 2021). Additionally, chickpeas are the raw material for roasted chickpeas, known as "l*eblebi*." Approximately 20% of total chickpea production in Turkey is used to produce roasted chickpeas (Coşkuner and Karababa, 2004; Atmaca, 2013; Özbey and Görgülü, 2016).

Roasted chickpeas, known as "leblebi," are a traditional snack consumed in Turkey from the past to the present (Coşkuner and Karababa, 2004; Sağlam and Seydim, 2017; Müjdeci et al., 2021). The origin of roasted chickpeas dates back to the years 1000-1300 AD, giving it a history of approximately 1000 years (Coşkun and Karababa, 2004; Müjdeci et. 2021). Roasted Chickpeas (*leblebi)* have been consumed in Turkey since the Ottoman period. (Gençkan and Gülümser, 1958; Bilgir, 1976; Aydın, 2002).

In Turkey, roasted chickpeas are divided into two main categories: peeled and unpeeled. Peeled roasted chickpeas are known as "*sarı leblebi,"* while unpeeled roasted chickpeas are referred to as "*white (gum) leblebi*" (Coşkuner, 2004; Gürsul and Batu, 2010; Çelik, Işık, and Yılmaz, 2015; Özbey, 2018). The most consumed type of roasted chickpeas in Turkey is "*sarı leblebi*" (Müjdeci, et. all., 2021). The main production stages of *sarı leblebi* include cleaning, sorting, heating, resting, peeling, and roasting processes (Coşkuner and Karababa, 2004).

Similarly, these processes are carried out without peeling the chickpeas for *white (gum) leblebi*. The chickpeas used for *leblebi* production are selected based on their size, shape, color, and harvest season. Generally, chickpeas belonging to the "Kabuli" class, which are large-sized, plump, round, and have a smooth surface, are preferred (Bilgir, 1976; Köksel et al., 1998; Coşkuner and Karababa, 2004). *Leblebi* producers prefer chickpeas with these characteristics, as well as those that are easy to peel (Çalışkan and Gemici, 2011).

When roasted chickpea production is examined across Turkey, Corum stands out as one of the leading cities. From the past to the present, many establishments in Corum engage in the traditional profession of *leblebi*-making, meeting a significant portion of Turkey's demand for roasted chickpeas. Çalışkan and Gemici (2011) state in their studies on roasted chickpea production and trade that Corum has a long-standing history in *leblebi,* underscoring its significance.

The traditional profession of *leblebi*-making in Corum has made the city synonymous with roasted chickpeas. It is possible to encounter *leblebi/*nut vendors on almost every street in the city. Therefore, when Corum is mentioned, roasted chickpeas are the first product that comes to mind. That is why Corum was the first city in Turkey to receive geographical indication protection for roasted chickpeas in 2002.

Roasted Chickpeas (*Leblebi*) have been consumed in Turkey since the 100oman period (Gençkan and Gülümser, 1958; Bilgir, 1976; Aydın, 2002). Corum has one of the oldest histories in *l*eblebi production. Historical records reveal that leblebi production has been a traditional profession in Corum. The term *"leblebici*" is recorded as a profession in 16 registers spanning 1839 to 1909, according to the Sharia registers (Ortakçı, 2011).

The use of traditional foods can enrich our daily diet by preserving important elements of local knowledge and cultural heritage (Sarmento, 2015). At this point, roasted chickpeas, which can be consumed as a traditional snack at any time of the day, are an important component of the daily diet.

The demand for healthier eating habits among consumers is increasing day by day. Therefore, considering health aspects for all foods is an important issue (Arboleya et al., 2010). Thus, given the health problems resulting from today's unhealthy eating habits, it is inevitable that roasted chickpeas, as a functional snack appealing to individuals from all walks of life, should be brought to the national and

international recognition they deserve and promoted accordingly.

Therefore, this study is highly significant in this regard. Additionally, transmitting traditional products as part of cultural heritage to future generations is crucial to the sustainability of traditional cuisine. Therefore, within the scope of this study, documenting the production of traditional Corum roasted chickpeas adds another important dimension to its significance.

Although the production and consumption of roasted chickpeas have a long history, there is limited research on their production. National and international studies in the field are mostly focused on food engineering aspects, such as determining the nutritional values of roasted chickpeas (Şimşek, Herken, and Ovando-Martinez, 2015; Özbey, 2016; Özbey and Görgülü, 2016), the sensory analysis of roasting process and different temperature levels (Sağlam and Seydim, 2017; Sağlam and Seydim, 2020; Coşkuner and Karababa), comparing the physical properties of raw and roasted chickpeas (Köksel et al.,1999), the prebiotic potential of chickpeas (Özbey, 2022), the use of yellow *leblebi* flour in boza production (Çelik, Işık, and Yılmaz, 2016), the use of broken roasted chickpea flour in gluten-free pasta production (Şahin, Odabaş, and Çakmak, 2022), and the chemical and microbiological analysis of unpackaged roasted chickpeas sold in Corum province (Müjdeci et al., 2021).

Furthermore, other existing studies focus on roasted chickpea production in Turkey (Bilgir, 1976; Gülümser, 1988; Aydın, 2002; Gürsul and Batu, 2010; Özbey, 2018), roasted chickpea production and trade (Çalışkan and Gemici, 2011), and tourism related to roasted chickpeas (Şahiner, 2023). As observed in the relevant literature review, research on roasted chickpeas, and specifically on the production of Corum roasted chickpeas, is quite limited. Therefore, the main objective of this study is to determine the traditional and modern production processes of Corum roasted chickpeas.

Additionally, the study aims to determine differences between traditional and modern production methods, investigate the current status of roasted chickpea production in Corum, and contribute to its sustainability. In this context, interviews were conducted with establishments engaged in traditional and modern roasted chickpea production in Corum using qualitative data collection techniques.

Furthermore, upon reviewing the relevant literature, no other study focusing on the traditional and modern production process of Corum roasted chickpeas was found, indicating the originality and unique value of this study.

2. CONCEPTUAL FRAMEWORK

2.1 Cultural Heritage and Tourism

Cultural heritage Cultural heritage is a set of values that reflect a society's shared past and reveal its historical accumulation (Kuşçuoğlu and Taş, 2017). In other words, cultural heritage is the legacy we have inherited from the past, which we live with today and pass on to future generations (UNESCO 2003; UNESCO, 2008).

This heritage, which can consist of both tangible and intangible elements, is an important asset that gives meaning not only to the society to which it belongs and to future generations, but also to all of humanity (Vecco, 2010; Christofoletti, 2022).

Cultural heritage plays an important role in shaping community identities and cohesion by serving as a bridge between the past and the present (UNESCO, 2003). Gastronomy, an important component of cultural heritage, defines individuals and societies as part of culture, reflects the traditions and customs of nations, and strengthens the desire to be together. Gastronomic heritage, a key cultural attraction, is considered an important cultural value in every country. Indeed, gastronomic heritage reflects itself as culinary culture from local to regional, national to international levels (Deniz, 2024) and also plays a fundamental role in destination branding and destination clustering (Ellis, Park, Kim & Yeoman 2018).

Gastronomic heritage is a mirror of society, incorporating local and regional elements, rituals, traditions, and heritage. The most important components of gastronomic heritage, namely traditional foods, are cultural experiences that embody traditions, stories, and symbols. At the same time, traditional foods are not only products consumed for nutritional purposes but also reflect social, economic and cultural development, as well as natural resources. These products, shaped by geographical features and cultural traditions, offer visitors a unique sense of the destination's character.

Thus, gastronomic products strengthen destinations' brand identity, enhance tourist appeal, and contribute to regional development (Pipan & Gačnik, 2021; Rızva et al., 2022; Çetin & Gün, 2025). In this context, chickpeas are not just a food product; they are also an important element of cultural heritage, representing the region's cultural identity and traditional knowledge. The cultivation of chickpeas in this region for centuries has contributed to the economic sustainability of rural communities, while transforming chickpeas into leblebi, which helps preserve the craftsmanship and traditional production techniques passed down from generation to generation.

Traditional food knowledge is recognized as one of the fundamental components of a society's intangible cultural heritage (Santilli, 2015). Indeed, the production, preservation and presentation processes of traditional foods ensure their sustainability through intergenerational knowledge transfer (Iwasaki-Goodman, 2017). This knowledge transfer is not limited to technical knowledge but also includes local ecological knowledge and cultural values, thereby playing a critical role in preserving the cultural identity and sustainability of communities (Pieroni et al., 2005; Amilien & Hegnes, 2013).

Gastronomy is one of the elements included in the new concept of cultural heritage, gastronomy, and cultural tourism, driven by growing trends toward healthy lifestyles, authenticity, environmental protection, and the need for high-quality experiences (Rivza et al., 2017). When planning a gastronomy tourism offer suitable for modern tourists, it is essential to ground it in both contemporary cultural influences and the heritage passed down to us (Pipan & Gačnik, 2021).

Gastronomy is an important component of cultural heritage for tourists (Martín et al., 2020) and serves as a fundamental starting point for discovering the cultural potential of the places they visit (Medina-Viruel et al., 2019).

Gastronomic tourism has been defined as a mix of activities, such as visiting and getting to know food producers or restaurants, and participating in food festivals. In these activities, tasting food and/or experiencing local dishes is the main motivation for travel (Hall and Sharples, 2003). Local gastronomy plays a central role as a tourist attraction and is one of the main motivations for visiting a destination.

Traditional gastronomy plays an important role in preserving local traditions and cultural values. Local dishes, often traditional ones, serve as a tool for tourists seeking authenticity and are frequently defined as 'authentic products that vividly reflect traditional local culture' (Sims, 2019); in the context of highlighting the stories, traditions, legends, and symbols of local dishes, they are also defined as 'an expression of the destination's cultural attractions' (Zhang et al., 2019).

On the other hand, the tourism industry is one of the key tools for the preservation, communication and development of gastronomic heritage. Eating in a destination is not just about satisfying one's hunger, but also about experiencing the local culture and interacting with the locals (Pipan & Gačnik, 2021). Gastronomic tourism allows tourists to experience a region's culture and history while motivating them to travel in search of new flavours. This type of tourism plays an important role in shaping visitors' travel preferences (Özdemir and Dülger Altıner, 2019).

Tourism is a tool for promoting local identity and preserving cultural diversity and uniqueness. Cultural tourism, in particular, is largely based on local identity and uniqueness. The approach that cultural heritage should be both preserved and utilized, i.e., that cultural heritage should be preserved through tourism while also contributing to the local economy, is a widely adopted method today (Büyük, 2025).

However, gastronomy tourism is a key to local development, encompassing tradition and modernity, as well as uniqueness, popularity, and sustainable tourism development (Vodenska, 2020; Dhame & Anıl, 2024). Indeed, traditional foods have significant potential in sustainable tourism (Süzer and Doğdubay, 2022). In this context, the existence of the traditional product leblebi plays an important role in creating a sustainable gastronomy tourism experience.

2.1 Raw Material of Roasted Chickpeas: Chickpea

Chickpea (Cicer arietinum), the raw material of roasted chickpeas, is one of the oldest and most widely consumed legumes worldwide, including in various countries across Asia, Africa, Europe, the Middle East, and the Americas (Sarmento, 2015). Archaeological and linguistic evidence regarding the early use of chickpeas by humans is limited, but reasonable estimates can be made about its history.

Chickpeas likely originated within the borders of present-day Southeastern Turkey and Syria (Van der Maesen, 1987). Helbaek (1970) reported that the oldest known chickpeas were found near Burdur in Hacılar, dating back to approximately 5450 BCE. Whether these chickpeas were cultivated or gathered from the wild is unknown, but the region known as the Fertile Crescent, where the wild ancestor of chickpeas, Cicer Arietinum, was recently discovered, is believed to be the place where chickpeas were first domesticated. Chickpeas are one of the first legumes to be domesticated as part of agricultural activities (Van der Maesen, 1987; Barron et al., 1992).

Chickpea is primarily one of the most widely cultivated legumes in dry and semi-arid regions worldwide (Gülümser, 1998; Rosiak, 2015; Çelik, Işık, & Yılmaz, 2015). Chickpea, its nutritional value, and its potential health benefits have been emphasized by nutritionists and food experts in many countries worldwide in recent years (Merga, Haji, & Yıldız, 2019). Consuming chickpeas is reported to offer physiological benefits that may reduce the risk of chronic diseases and optimize health (Jukanti, 2012: 18).

Chickpeas are among the healthiest and most nutritious foods among legumes due to their nutritional properties and low glycemic index (Hallab et al. 1974; Sarmento et al., 2014; Şimşek et al., 2015; Sağlam & Seydim, 2017). With its high protein content, which makes up almost 40% of its weight, chickpeas, along with carbohydrates, dietary fiber, minerals (K, Zn, Ca, and Mg), and trace elements, are a healthy and vegetarian food (Merga et al.).

Additionally, chickpeas are considered a functional food with potential beneficial effects on human health (Jukanti, 2012: 18; Özbey, 2022: 3). Therefore, chickpeas constitute an important part of the diet, especially for vegetarians and other individuals.

2.2 The Transformation Process From Chickpeas To Roasted Chickpeas And Some Chemical And Physical Changes

Chickpeas undergo various thermal processing steps to become roasted chickpeas (*leblebi)*. These heat treatment processes are crucial for removing excess moisture from the chickpeas, making it easier to separate the husk, and roasting the chickpeas to enhance their flavor. Additionally, the chickpeas are soaked and left to ferment. During these processes, structural changes can occur, affecting the physical properties of chickpeas (Bilgir, 1976; Köksel, 1998).

Unprocessed raw chickpeas have a very hard and dense structure, lacking air pockets. However, during the heating, resting, and soaking stages, physical and chemical changes cause the chickpeas to swell, creating air pockets. During processing, proteins and carbohydrates undergo changes due to thermal treatments. Particularly during the roasting stage, the Maillard Reaction occurs as proteins react. This reaction is even more pronounced when the roasting process is performed twice (double roasting).

The polysaccharides on the surface of the chickpeas caramelize during the spotting (roasting) stage, adding aroma to the roasted chickpeas. This reaction is widely used by chefs in professional kitchens to enhance the flavor of foods.

Furthermore, some acids partially decompose during roasting, and volatile acids partially evaporate. After all processing steps, the volume of the roasted chickpeas increases, but their density and internal weight decrease (Tekeli, 1965; Köksel, 1998; Gülümser, 1998; Aydın, 2002, Özbey, 2015; Simsek, Herken and Ovando-Martinez, 2016). Tables 1, 2, 3, and 4 below show the composition and some properties of the chickpeas.

Table 1. Some physical properties and average composition of raw chickpea and Sarı leblebi

	Raw Chickpea (n=20)[a]	Rasted Chickpea "Sarı Leblebi" (n=82)
100 kernel weight (g)	40.7	37.5
Size (mm)		
Length	9.6	9.6
Width	7.6	8.2
Thickness	7.8	8.7
Water (%)	10.22	6.69
Ash (%)	2.90	2.64
Protein (%)	29.39	26.15
Oil (%)	6.48	6.51
Starch (%)	53.76	51.65
Cellulose (%)	3.23	0.56

Source: Bilgir, 1976. an: Sample number

Table 2. Average composition of raw chickpea and Sarı Leblebi samples during processing

	Raw Chickpea	Before Roasting	Single Roasted	Double Roasted
Water (%)	10.47	7.42	7.08	6.42
Ash (%)	2.43	2.52	2.64	2.80
Protein (%)	22.67	22.79	24.01	22.94
Oil (%)	6.41	6.38	6.35	6.33
Starch (%)	50.88	53.30	50.44	46.33
Sugar (%)	2.05	3.00	2.75	1.97
Dextrin (%)	0.58	1.50	1.50	1.48

Source: Tekeli, 1965

Table3. Effect of leblebi processing on chemical composition of chickpeas (%).

Sample	Moisture	Protein	Fat	Ash	Carbohydrate*
Raw Chickpea	10.78 d	19.11a	5.98a,b	2.54a,b	61.59a
1.Tempering	7.25c	19.44a	6.39b,c	2.60a,b	64.32b,c
2.Tempering	3.05a	20.44a	24.016.85b, c	2.77b	66,89d,e
Roasting	5.38b	20.51a	7.90d	2.46a	63,75b
Last Roasting (Dehulled Leblebi)	3.31a	20.79a	7.85d	2.49a	62.13a,b

Source: Özbey (2016).

Table4. Proximate Composition of Chickpea and Sarı Leblebi Samples

Product	Moisture (g kg^{-1})	Protein (g kg^{-1})	Fat (g kg^{-1})	Ash (g kg^{-1})	Sodium (mg kg^{-1})
Raw Chickpea	93.79a	224.13cd	57.25c	31.57b	11.75b
Single Heat-treated Chickpea	64.58b	239.55a	62.15bc	32.68b	5.35b
Double Heat-treated Chickpea	58.21c	222.11d	61.25bc	33.62b	16.90b
Single Roasted Leblebi	46.07d	229.51b	69.55a	28.90b	11.40b
Dobulbe Roasted Leblebi	31.76e	228.91bc	70.40q	29.71b	17.40b

Source: Simsek, Herken ve Ovando-Martinez (2016)

3 METHODOLOGY

3.1 Research Problem and Data Collection Tools

Qualitative research method was adopted in the study dealing with the traditional and modern production processes of Corum roasted chickpea. In this context, the research problem is defined as "What are the traditional and modern production processes of roasted chickpea and the changes in the profession of chickpea production over time?" Interview questions were developed through consultations with experts in gastronomy and tourism.

A total of 5 research questions were used to collect data through semi-structured interviews. Separate interviews were conducted with 9 participants in these four businesses. In addition, the roasted chickpea production process was observed on-site in the production facilities. Preliminary interviews were conducted face-to-face with each participant to schedule appointments. The interviews lasted between 45 and 55 minutes and took place between February 12, 2024, and February 17, 2024.

The interview questions addressed to the participants are as follows

1.What is the establishment story and characteristics of your business? Please explain in detail.

2.Can you explain in detail the raw material and characteristics of Corum roasted chickpea?

3.Can you explain in detail the production processes/stages of Corum roasted chickpea?

4.What are the traditional tools and equipment used in the production of Corum roasted chickpea? Could you explain in detail?

5. What are the types of Corum roasted chickpea produced by your business?

3.2. Data Analysis and Processing

Within the scope of the study, content analysis was used to analyze the research data. In this context, the interviews conducted with businesses were transcribed, and any shifts in meaning, adherence to writing conventions, and punctuation were appropriately adjusted before being transferred to a Word document. Open and closed coding systems were employed to process the data obtained. Interview data were examined to establish main themes and subthemes. The identified main themes and subthemes were then imported into MAXQDA for coding. To further elaborate the content analysis, descriptive analysis techniques such as document portfolios, code-subcode-section models, and word cloud analyses were employed.

4 RESULTS ANALYSIS

After decoding the data obtained within the research scope, main themes, sub-themes, and codes were systematically determined, and explanations were provided for better understanding of the themes. Furthermore, document portrait analysis was used to identify the topics participants discussed the longest and the shortest.

Subsequently, a code-subcode model analysis was conducted for each theme, providing frequencies and

examples of participants' expressions. Additionally, a word cloud was created to identify the most frequently used words among participants regarding the research topic. The results of the analyses conducted within the scope of the research were presented in figures.

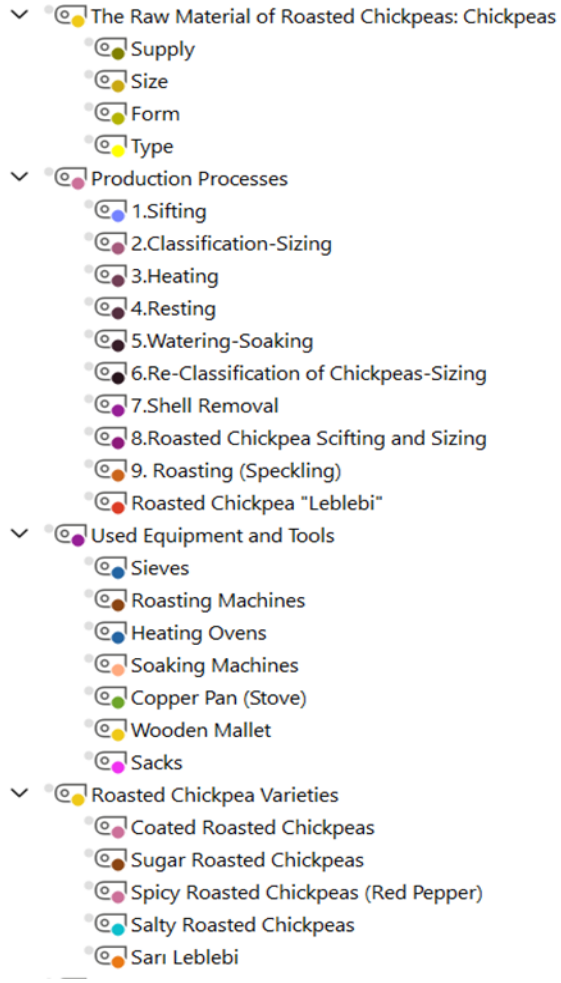
Table 5. Demographic Information of Participants (Businesses)

Businesses	Participants and Experience-Mastery	Generation	Production Model
B1	**P1-** 65 years	4	Traditional
	P2- 60 years	4	Traditional
	P3 -20 years	2	Traditional
B2	**P4** -65 years	3	Traditional
	P5- 22 years	2	Traditional
B3	**P6**- 30 year	3	Modern
	P7 -15 years	2	Modern
B4	**P8** -28 year	3	Modern
	P9 -10 yeras	2	Modern

Source: own elaboration.

As part of the research, interviews were conducted with roasted chickpea producers to examine the traditional and modern production processes of Corum roasted chickpeas.

Figure 1. Code System Including Main Theme, Sub-Theme and Codes for Traditional and Modern Chickpea Production



Source: own elaboration.

According to preliminary research aimed at identifying the participants, there are 6 businesses in the center of Corum province that both produce and sell roasted chickpeas. Among these, only two businesses represent traditional production. The remaining 4 businesses produce and sell roasted chickpeas in a modern and commercial manner. Among these 4 businesses, 2 were included in the sample. Information regarding the participants (businesses) is provided in Table 5.

When the code system regarding traditional and modern roasted chickpea production was examined (Figure 1), it is observed that 4 main themes and 26 sub-themes were created. The main themes and sub-themes, established by the authors through an in-depth analysis of the data, provide insight into the traditional and modern production of Corum roasted chickpeas and the profession of roasted chickpea making. The total number of codes related to these themes was 373.

In the study addressing the traditional and modern production of Corum roasted chickpeas and the profession of roasted chickpea making, a code-sub-code section model was created using the MAXMaps tab in MAXQDA. This allowed the frequencies of each main theme and its related sub-themes, as well as participants' sample expressions related to the sub-theme, to be visualized. In the relevant models, the most coded sub-themes are represented by the thickest arrows.

In other words, the frequency of coding for the respective sub-theme is directly proportional to the thickness of the arrows. Code-sub-code models for themes and sub-themes are shown in Figures 2, 3, 4 and 5. Additionally, since the theme of the establishment story of the business was tabulated in the participants' demographic information section, it was excluded from this section.

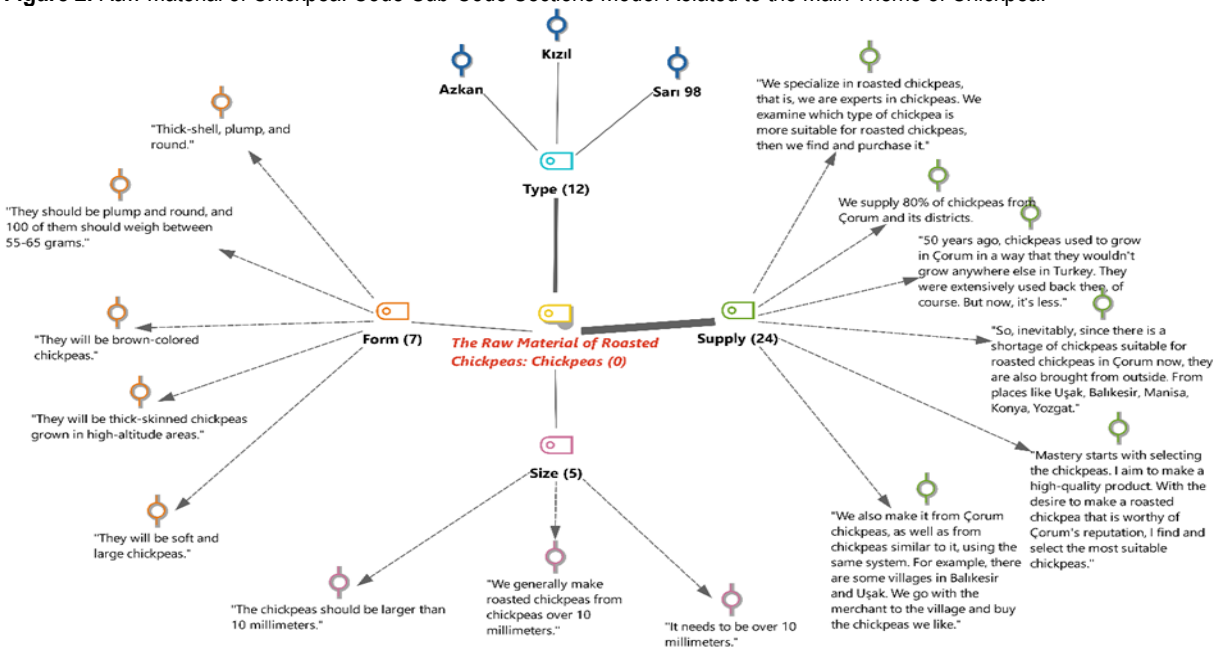
When the relevant main theme is examined, the most coded sub-themes are, respectively, supply (f=24), type (f=12), form (f=7), and size (f=5). When the data obtained from the participants are examined, it is evident that the supply of chickpeas, which are the raw material for Corum roasted chickpeas, is quite important, and the most suitable chickpea should be selected for the production process.

In this context, it has been determined that Azkan and Sarı98 chickpea types are used for roasted chickpeas. While Sarı98 type chickpeas are supplied from Karaman, Azkan type chickpeas are supplied from Corum and its districts. Red chickpeas are also a type of chickpea obtained from Corum.

However, unlike in the past, chickpeas are also supplied from provinces such as Uşak, Manisa, Balıkesir, and Yozgat due to the inadequacy of raw material in Corum alone. At this point, it is clear that the focus is not only on the raw material, namely chickpeas, from Corum, but rather on where the highest quality and most suitable chickpeas for roasted chickpeas are available.

The common feature of the chickpeas procured for Corum roasted chickpeas is that they are large (over 10 millimetres), thick-skinned, plump, brown, and grown at high altitudes. Another characteristic is that 100 chickpeas have an average weight of 55-65 grams.

Figure 2. Raw Material of Chickpea: Code-Sub-Code Sections Model Related to the Main Theme of Chickpea.



Source: own elaboration.

When all the data obtained from the participants regarding the raw material are considered, it can be said that roasted chickpea masters are more interested in the suitability and quality of chickpeas for roasting than in their place of production. Therefore, procuring chickpeas suitable for roasted chickpeas from other provinces is also possible for roasted chickpea production.

Examining the main theme of the production processes of Corum roasted chickpeas, the most frequently coded sub-themes are respectively; roasted chickpeas (final product) (f=31), heating-roasting (f=28), Shell removal(f=18), resting (f=12), speckling (f=11), sieving and sizing roasted chickpeas (f=8), watering-soaking (f=7), reclassification of chickpeas (f=6), sieving (sifting) (f=4), and classification-sizing (f=4). According to the data obtained from the participants, (all participants) the production stages of Corum roasted chickpeas are as follows:

1. Sifting (Sieving): The first step in the transformation of chickpeas into leblebi is the screening process. At this stage, screening is performed to remove foreign material from the chickpeas. In the traditional method, this is done with a sieve, while in the modern technique, it is done with a laser system that separates foreign substances.

2. Classification: At this stage, the previously screened chickpeas are classified according to their size. Large grains are separated from small ones. Chickpeas that are unsuitable for leblebi, those smaller than 10 mm, are also removed. In the classification process, a sieve is used in traditional methods, whereas selector machines are used in modern methods.

3. Heating: Classified chickpeas are roasted in heating boilers for approximately 28-20 minutes, a process commonly referred to as "tavlama" in traditional methods. The heating process is usually repeated 2 or 3 times, depending on the chickpeas' condition. In traditional production, heating is repeated every 5-6 days, while in modern production, it is repeated once in month.

Additionally, in the traditional method, chickpeas are rested in hessian sacks after each heating, whereas in modern methods, they are left to rest in sacks after the first heating and then spread out on display racks after the second heating.

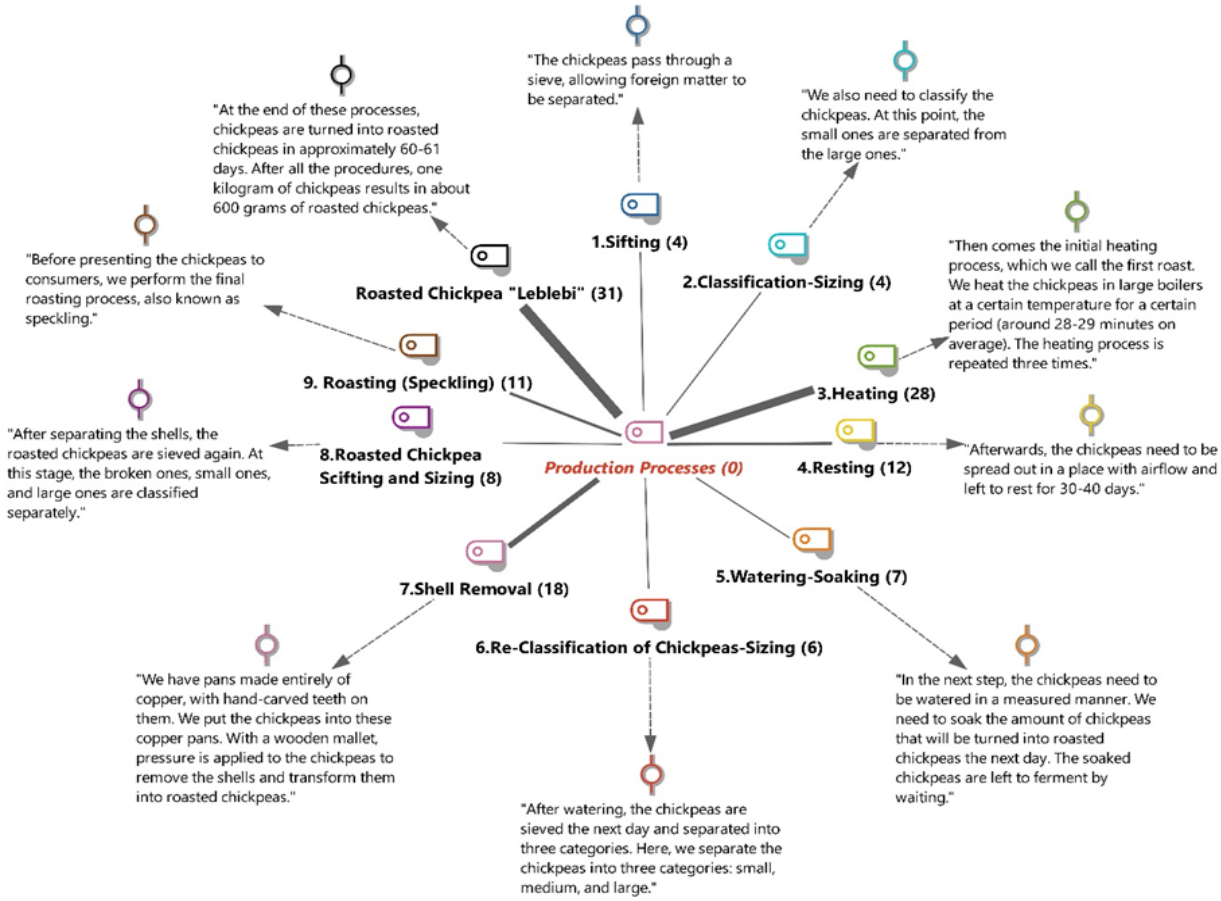
The primary purpose of the heating process is to reduce the moisture content of the chickpeas and separate them from their husks without using any chemical additives. Roasting is carried out in natural gas ovens. Whether the chickpeas have reached the desired consistency after each heating is determined not by a specific temperature-time combination but by the workers' expertise.

According to information obtained from participants (P1-P2-P3-P5-P6-P7), the first heating is judged by its softness, aroma, and sound when squeezed by hand, the second heating by the sound when crushed with teeth, and the third heating by the temperature, burning sensation, and aroma when held in the palm.

4. Resting: After the heating process, the chickpeas are left to rest in a cool area with low humidity. These resting areas are called airing areas. It is important to have air circulation in these areas. The chickpeas, spread on the ground with a thickness of about 20 cm, are periodically mixed to rest. In both methods (traditional and modern), the chickpeas are rested for approximately 60 days during the heating process. The rationale behind this process is to reduce the moisture in the chickpeas, making it easier to separate the skin.

5. Watering-Soaking: After the approximately 60-day resting process, the chickpeas are soaked in watering tanks. The amount of water is around 10% of the chickpea quantity. The soaking process is applied slowly, either by dripping or sprinkling, into a rotating tank containing the chickpeas. Once the soaking process is completed, the chickpeas are covered with a thin cloth and left to stand for 24 hours. During this waiting period, the chickpeas undergo fermentation.

Figure 3. Code-Sub-Code Sections Model Related to the Main Theme of Production Processes of Çorum Roasted Chickpea



Source: own elaboration.

6. Reclassification of Chickpeas: Before commencing the process of making chickpeas into leblebi, the soaked chickpeas are re-classified. At this stage, chickpeas that have swelled less and those that have swelled more are separated and re-classified according to their own sizes. The reclassification process is essential to the next step, peeling. This is because chickpeas of different sizes will have different roasting times on the stove. Additionally, if chickpeas of different sizes are not equalized, smaller ones will not peel during the peeling process as they will not come into contact with the pestle, while larger ones will start to crack. In the traditional method, reclassification is done with a sieve, while in the modern method, it is done with selector machines.

7. Shell Removal: This stage, as expressed by participant (P1-P3-P4-P6), is described as "After 60 days, the chickpeas are ready to become leblebi on the 61st day, meaning this stage is when the chickpeas turn into leblebi." The peeling process is carried out in pans made entirely of copper, with hand-carved teeth (grooves) on them. In the traditional method, the heat source for these pans is wood (usually Juniper), while in the modern method, it is natural gas.

However, there is no standard degree, and the master's degree requires consistency through hand and eye control. After soaking, the classified chickpeas are transferred to these pans, and then, with heat, the chickpeas soften and swell. At this moment, pressure is applied to the chickpeas using a wooden pestle, approximately 90 cm in diameter and made of pine, to peel them.

The timing of the pestle's application is crucial and requires skill. The peeling process takes approximately 5-8 minutes. At the end of this stage, the chickpeas turn into leblebi, taking on a golden yellow color. Participant (P2) describes this stage as "You watch the opening of a rose right before your eyes. This process creates a passion in a person; it mesmerizes them. What ties me to this art is exactly this."

8. Roasted Chickpea Scifting and Sizing: In this stage, the chickpeas, after peeling, are first passed through a sieve to separate them from dust and bran after they have been turned into leblebi.

Additionally, unpeeled chickpeas and those unsuitable for leblebi are separated. Subsequently, the leblebi is classified as small, medium, or large. Furthermore, broken leblebi during peeling are classified separately. This process is carried out while the leblebi is still hot. Participant (P2) explains the reason for this, stating, "Leblebi should be sifted and sized while it is still hot, if done when cold, both the shine on its surface will disappear, and there will be more waste." In the traditional method, screening and sizing are done with a sieve, whereas in the modern method, they are done with selector machines. At the end of the process, the leblebi is stored in sacks. These stored leblebi are roasted periodically to prepare them for sale.

9. Roasting-Speckling: This stage marks the final step in the transformation of chickpeas into leblebi. It is carried out in roasting machines equipped with a gas heat source and an electrically rotating wheel inside. However, participants (P1-P2-P3-P4-P8) recall that in the early years of their profession, before roasting machines existed, this process was traditionally done on stoves. Initially, the leblebi, ready in sacks, is placed into the roasting machine in the required amount.

The leblebi inside the machine begins to roast as it rotates thanks to the wheel. The roasting process takes place at approximately 100-120°C for 8-10 minutes. An important aspect of this stage is that the leblebi to be roasted must have been rested beforehand.

10. Leblebi (Roasted Chickpea): After all the processes, chickpeas transform into leblebi in approximately 60 days. About 600 grams of leblebi are obtained from 1 kg of chickpeas as the raw material. The production of leblebi is described as a highly demanding, lengthy process requiring expertise.

When examining the main theme related to the tools and equipment used in the production of Corum chickpeas (figure 5), the most frequently coded sub-themes are found to be stove (f=13), mallet (f=12), roasting machine (f=9), sack (f=9), sieve (f=8), heating stoves (f=3), and watering tank (f=2).

According to data obtained from participants (P1-P2-P3-P5-P7-P9), most of the tools and machines used in the production of Corum chickpeas (roasting machine, heating machine, sieve, sieve screen, pan) are manufactured in Corum. This result indicates that Corum is not only a significant center for chickpea production but also for producing the necessary equipment for it.

The stove (pan) used for peeling chickpeas is entirely made of copper and features handcrafted teeth that facilitate peeling. In traditional methods, the heat source for these stoves is wood, whereas in modern methods, natural gas is used. The wooden mallet on top of the pans, traditionally known as "maflak" or "varak," is used for peeling. Participants (P1-P2-P5) mentioned that in the early years of the profession, the roasting and peeling processes were traditionally carried out in these stoves. In later years, with the introduction of roasting machines, the roasting (speckling) process in the pan was largely replaced by them.

Pic. 1. Heating, Resting and Soaking Process

Source: authors' archive

Pic. 2. Fermented Chickpea, Shell Removal Process and Roasting-Speckling Process

Source: authors' archive.

Pic. 3. Final Product: Tradational Corum Roasted Chickpea "Leblebi"

Source: authors' archive.

Participant 2 highlights the significant contribution of roasting machines to the chickpea roasting profession by stating, "With the advent of roasting machines, the process became much easier. If these machines hadn't been invented, chickpea roasting might have died out by now." In roasting machines, the traditional method uses wood as the heat source, while the modern method uses natural gas.

Additionally, the machine requires electrical power for the internal wheel, which ensures the chickpeas are evenly roasted. The machine not only heats the chickpeas but also continuously stirs them, creating the speckled effect. Roasting machines are also used for "pre-heating" or "yavru heating" to shorten the peeling process. According to Participant 2, the yavru heating tank is used to prepare the chickpeas for peeling. Thus, as expressed by the participants, roasting machines are versatile tools in chickpea production, significantly facilitating the process.

The irrigation tanks are cylindrical and used to soak chickpeas by sprinkling. During irrigation, the tank rotates continuously, ensuring an even soaking process. On the other hand, heating tanks are used to heat the chickpeas, reducing their moisture content and making them easier to peel. These heating tanks use natural gas.

The sacks used in the production process are employed during the resting stage of the chickpeas. These sacks, also known as telis or hazelnut sacks, are made from hemp. The porous nature of hemp allows the chickpeas to easily release steam and receive air during the resting phase.

Figure 4. Code-Sub-Code Sections Model Related to the Main Theme of Tools and Equipment Used in the Production of Corum Roasted Chickpeas.

Source: own elaboration.

Regarding sack usage, Participant 2 mentioned that in the past, hair sacks were used, but they were abandoned because they caused bacterial growth in the chickpeas. Finally, sieves and sifters are used to remove foreign substances from the chickpeas and roasted chickpeas (leblebi) and to classify them. There are separate sieves and sifters for chickpeas and leblebi.

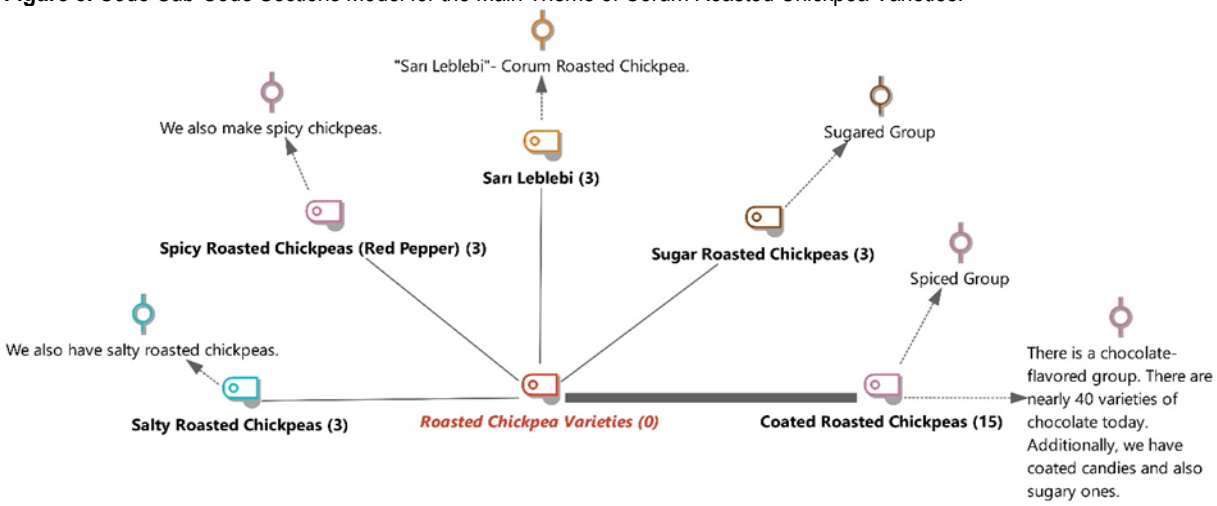
Participant 2 remarked, "The sifters we used in the past were made of leather, that's how my father used them." While these two pieces of equipment were widely used in traditional methods, modern methods typically employ laser-equipped devices to remove foreign substances and selector machines for sieving and classification. Lastly, some images of the tools and equipment used in the leblebi production process are presented below (Pic 4).

When examining the main theme of the varieties of Corum chickpeas, the most frequently coded sub-theme is "coated" (f=15), while the other sub-themes, "plain-salted-spicy" (f=3), are equally coded. When it comes to Corum chickpeas, the first thing that comes to mind is plain (yellow) chickpeas. According to data from participants (P1-P2-P3-P4-P5-P6-P7-P8-P-9), the main product in chickpea production is plain (yellow) chickpeas.

Pic. 4. The tools and equipment used in the leblebi production .

Source: authors' archive.

Figure 5. Code-Sub-Code Sections Model for the Main Theme of Corum Roasted Chickpea Varieties.



Source: own elaboration.

Plain chickpeas, produced since the early years of chickpea farming, have been later diversified into spicy, salty, and sugary varieties. These four products constitute the most basic chickpea varieties. Nowadays, chickpea varieties have become even more diverse, with a significant increase in their numbers. For instance, within the category of coated chickpeas, chocolate, spicy, fruity, and dragee chickpeas are subcategories, each containing numerous varieties.

These varieties are continually increasing, particularly in modern production, driven by evolving food production technologies and consumer expectations. Picture 5 below shows chickpeas and traditionally produced Corum chickpeas (plain), along with some of the most consumed varieties (sugary, salty, spicy, honey-sesame, poppy-seed, and chocolate).

Pic. 5. Chocolate Roasted Chickpea (Modern) and Other Varieties (All pictures authors' archive)

Source: authors' archive.

On the other hand, besides product quality, the impact of the packaging used in product sales on positive attitudes is significant. Meticulously prepared souvenir packages containing Corum's cultural and touristic elements and information about roasted chickpeas are highly appreciated by consumers. Participant 4 emphasizes the importance of these souvenir packages: "We have souvenir packages because presentation is very important. So is production, but marketing and presentation are also very important. That's why these souvenirs are taken. People really like them." Additionally, featuring the Hittite cultural symbol, the solar disc, on souvenir packages helps preserve cultural heritage.

Pic. 6. Gift Packaging Used in Corum Roasted Chickpea Sales (All pictures Burak Çıtak archive).

Source: authors' archive.

Another analysis used in the study is word cloud analysis. The MAXDicto module in MAXQDA was used for this analysis. Before the analysis, a word-frequency analysis was conducted. In this context, the word frequency tab was used to apply the standard exclusion list, and punctuation marks were included in the section for cutting characters. Then, the minimal character count was set to one, resulting in 12,510 words. However, to exclude irrelevant words such as "this", "that", the minimal character count was set to three. Additionally, some words were merged, and some meaningless words were added to the exclusion list. Then, a word cloud analysis of the 41 most frequently used words was conducted. The results are shown in Figure 3.

When considering the analysis results, words are displayed in different colours and sizes in the visual. The difference in sizes reflects the frequency of word occurrences; in other words, as the number of repetitions of a word increases, its size also increases.

Figure 6. Word Cloud on Roasted Chickpea Production and Roasted Chickpea Growing Profession

Source: own elaboration.

Accordingly, based on the interviews conducted in the study, the top 10 most frequently used words by participants are as follows: "leblebi" (f=127), "chickpea" (f=75), "Corum" (f=58), "Traditional" (f=24), "Natural" (f=19), "Rosting" (f=18), "Azkan" (f=11), "Telis" (f=10), "Functional" (f=9), and "Speckling" (f=8). The frequent use of these words is due to the focusstudy's study on the production of Corum roasted chickpeas and the profession of leblebici (roasted chickpea makers). Moreover, especially when examining the top 10 words, these words carry significant meanings directly related to the production of Corum roasted chickpeas and the profession of leblebici.

5. CONCLUSION AND DISCUSSION

Traditional products associated with cities are part of the region's gastronomic identity. In this regard, the study examined the traditional and modern production processes of leblebi, which are associated with the province of Corum, as well as the profession of leblebi making. As a result of the analyses conducted within the scope of the research, it was determined that the businesses have been operating for at least three generations, and the current operators have professional experience ranging from 28 to 65 years.

Regarding the findings on raw material sourcing, it is understood that the "Azkan", "Sarı98", and "Kızıl" chickpea varieties are used to produce leblebi. However, unlike in the past, due to the inadequacy of the raw materials obtained solely from Corum, supplies are also sourced from other provinces such as Uşak, Manisa, Karaman, Balıkesir, and Yozgat. Chickpeas of the Azkan and Kızıl varieties sourced from Corum are generally obtained from central villages in districts such as Alaca and Sungurlu. The common characteristics of chickpeas suitable for leblebi production are; being large, thick-sehell, brown, and grown in high-altitude areas. Additionally, each chickpea should weigh an average of 55-65 grams and be over 10 mm in size. Results related to weight is similar to the study conducted by Özbey (2018).

When examining the production process of Corum leblebi using both traditional and modern methods, it is observed that transforming chickpeas into leblebi involves 14 steps, including raw material supply. This process is the same in both methods and proceeds as follows: Chickpea sifting-Classification-Heating (1st, 2nd, and 3rd heating)-Resting-Soaking-Reclassification of chickpeas-Shell Removal-Leblebi sizing (classification)-Leblebi resting-bagging-Speckling. This result is similar to those reported in the studies by Coşkuner and Karababa (2004) and Özbey (2018). Furthermore, transforming chickpeas into leblebi takes approximately 61 days. This finding indicates that leblebi production is a labour-intensive profession requiring craftsmanship.

Another significant result of the study is that the production process of Corum leblebi, in both traditional and modern methods, has remained unchanged for centuries, preserving its originality. However, it was determined that, while wood is used for heating in the traditional method, natural gas is used in the modern method, and more advanced devices are employed. In this regard, it is observed that with advances in modern technology, production has been facilitated, and production quantities have increased compared to the past. However, the study concludes that traditional production has significantly declined in recent years, with only two facilities producing it in limited quantities. This situation suggests that traditional leblebi production is at risk of being forgotten as part of cultural heritage. Therefore, taking necessary measures in this regard is of utmost importance.

In the study, the equipment used in traditional and modern leblebi production was examined. According to the results obtained, the equipment used includes a roasting machine for the speckling process, a completely copper-made grooved stove (pan) and a wooden mallet (maflak-varak) used for peeling, a watering tank used for moistening the leblebi, a heating boiler used for heating, sieves and riddles used for chickpea and leblebi screening and classification, and a hemp sack for resting chickpeas and leblebi.

In addition to these, in the modern method, natural gas is used instead of wood, selector machines instead of riddles, and laser-based foreign-substance-separating devices instead of sieves. When the varieties of leblebi produced in Corum are examined, the first type that comes to mind when Corum leblebi is mentioned is the yellow (plain) "sarı leblebi". Sarı leblebi is the main product in the leblebi-making profession. In fact, the geographical indication is obtained

based on plain leblebi. In addition to plain leblebi, spicy, salty, and sweet varieties are also among the main products. Apart from these, there are around 40 varieties of leblebi known as coated leblebi, including spiced, chocolate-covered, and fruity varieties.

The findings of this study reveal that gastronomic heritage is integrated with cultural identity, the local economy, and the transfer of traditional knowledge. The techniques used in the production of leblebi constitute a concrete example of intergenerational knowledge transfer, consistent with theories of traditional knowledge and intangible cultural heritage (Santilli, 2015; Iwasaki-Goodman, 2017).

Furthermore, leblebi production contributes to the economic sustainability of rural communities, directly relating to sustainable tourism and development theories (Halme, 2001; Gaonkar & Sukthankar, 20024). Additionally, the product's emergence as an important component of Çorum's destination identity can be evaluated within the context of destination branding and place-making theories (Lew, 2017). In conclusion, the findings of this study demonstrate that gastronomic heritage plays a central role not only in preserving local cultural identity but also in enhancing a destination's tourist appeal and contributing to sustainable development goals.

In conclusion, with the increasing interest in gastronomic tourism, there is a relationship between the preservation and development of regional identity, the enhancement of environmental awareness and sustainability, the protection of local food production, and the preservation of traditional heritage, skills, and lifestyles, which bring social and cultural benefits (Everett & Aitchison, 2010). Therefore, when looking specifically at Leblebi, its traditional production processes, the intergenerational transfer of mastery knowledge, and its geographical indication certification make it an important element within the scope of cultural heritage.

Indeed, the study by Şahiner (2023) highlights that Leblebi boxes and Leblebi itself constitute a memory that symbolizes the city within the context of cultural heritage. This traditional and healthy product, through gastronomy tourism activities, festivals, and destination promotion campaigns, both enhances the region's brand value and offers visitors unique and meaningful experiences that allow them to establish a connection with the destination. Therefore, the preservation of gastronomic heritage and its integration into tourism are seen as integral to sustainable destination development.

5.1 Implications and Recommendations for Gastronomy & Tourism

Thanks to the study, it is anticipated that the national and international recognition of Corum's traditional roasted chickpeas, which hold a significant place in Corum's gastronomic identity and are protected by a geographical indication, will increase.

Additionally, the traditional production process, which is gradually decreasing and therefore at risk of disappearing, will be documented in the literature and passed on to future generations, providing value for the region and producers. Therefore, scientific research on local products is considered crucial for the sustainability of culinary culture. Upon reviewing the relevant literature, no other study was found that comprehensively addresses Corum roasted chickpeas, including their traditional and modern production, the tools and equipment used, differences from other regions, and the profession of roasted chickpea production.

Sustainability in gastronomy entails ensuring the continuity of food sourcing, production, consumption, and marketing without harming the environment and human health. Thus, maintaining the production of local products is vital for gastronomy (Scarpato, 2003). The research findings offer some recommendations for the sustainability and intergenerational transmission of traditional and professional roasted chickpea production. These recommendations are as follows;

The study revealed that the number of traditional roasted chickpea production establishments has significantly decreased, with only two operated by master craftsmen. This result indicates that traditional roasted chickpea production and the profession itself are in jeopardy regarding sustainability. Therefore, businesses, local governments, and civil society organizations need to take measures to preserve traditional roasted chickpea production.

The research found that younger generations do not want to pursue this profession and are turning to other professions. In this regard, it is crucial to incentivize the younger generation to pursue this profession. Accordingly, recommendations include establishing vocational training courses for master and apprentice levels, ensuring job security, raising awareness through various activities and events, and improving employee wages.

The awareness of Leblebi is limited. It is essential to prioritize national and international gastronomic events to promote and market traditional Corum roasted chickpeas, using effective channels such as television and social media. It is believed that this will contribute positively to demand, production volume, and production sustainability. Additionally, highlighting the health benefits of roasted chickpeas as a functional, healthy snack that appeals to all demographics could increase consumption if emphasized more effectively.

As a result of the study, it has been observed that there is no chamber of commerce in which roasted chickpea producers in Corum are registered together (the chamber has closed down), with some registered under bakers and others under grocers. This situation significantly hampers collective action and professional organization for businesses. Therefore, the urgent need to establish a chamber of commerce has become apparent. Finally, future research is needed on Corum leblebi in the context of gastronomic tourism and its nutritional and health aspects.

5.2 Limitations And Suggestions For Future Research

The study has examined the roasted chickpea in depth, a traditional product. Future studies can evaluate consumers' and tourists' attitudes towards the product using a quantitative research method. In addition, the positive contributions of roasted chickpea to health can be examined in more detail and stronger evidence can be presented that it is a functional food.

REFERENCES

Amilien, V., & Hegnes, A. W. (2013). The dimensions of 'traditional food'in reflexive modernity: Norway as a case study. *Journal of the Science of Food and Agriculture*, *93*(14), 3455-3463.

Arboleya, J. C., Lasa D., Olabarrieta, I., & Martínez de Marañón, I. (2010). "New trends for food product design", Smith, J & Charter, E. (Ed.), Functional Food Product Development, Willey-Blackwell Publishing, Oxford, UK. s. 227-243.

Atmaca, E. (2013), "Chickpea cultivation in arid conditions (in Turkish)". Eskisehir Ticaret Borsası Dergisi, Vol 22 No. 4, pp. 18–21.

Aydın, F. (2002), "Nohudun kullanimi ve leblebi üretimi". Gaziantep hububat ürünleri teknolojisi kongre ve sergisi, 3-4 Ekim 2002, https://kutuphane.tarimorman.gov.tr/vufind/Record/1245357/Description (accessed 20 February 2024).

Barron, J., Gonzalez, C., Albar, C. and Tirado, C. (1992), "Dry roasting for poor quality chickpeas (cicer arietinum)", Journal of Food Processing and Preservation, Vol.6, No. 4, pp. 235 – 262.

Bilgir, B. (1976), Türk Leblebilerinin Yapılışı ve Bileşimi Üzerine Araştırmalar. Ege Üniversitesi Ziraat Fakültesi Yayınları, Bornova Izmir.

Büyük, Ö. (2025). Kültürel Mirasin Lezzeti ve Gastronomi Turizmi: Gökçeada Rum Mutfağı. 1st International Cypruscongress Of Scientific Research, 21-23 March 2025Near East University, Kyrenia, TRNC.

Can, M. (2009). Kültürel miras ve müzecilik. Kültür ve Turizm Bakanlığı. https://teftis.ktb.gov.tr/Eklenti/1279,muserrefcanpdf.pdf?0.

Coşkuner, Y., and Karababa, E. (2004), "Leblebi: a roasted chickpea product as a traditional turkish snack food". Food Reviews International, Vol, 20, No. 3, pp. 257274.

Çalışkan, V., and Gemici, Y. (2011), "Türkiye'de leblebi üretimi ve ticareti", Marmara Coğrafya Dergisi, No. 23, pp. 234-266.

Çelik, İ., Işık, F., and Yılmaz, Y., (2016), "Effect of roasted yellow chickpea (leblebi) flour addition on chemical, rheological and sensory properties of boza", Journal of Food Processing and Preservation, Vol. 40, No. 6, pp. 1400-1406.

Çetin, K., Çetin, M., Gün, İ. (2025). From Traditional Knowledge to Gastronomic Heritage: Analysis of the Cultural Value and Chemical Properties of Jaji Cheese. International Journal of Gastronomy and Food Science, 101186. https://doi.org/10.1016/j.ijgfs.2025.101186.

Deniz, T. (2024). Kültürel Miras Yönetimi Kapsamında Gastronomi Turizmi. Safran Kültür ve Turizm Araştırmaları Dergisi, 7(1): 18-28.

Dhama, N. ve Anıl, K. (2024). Sürdürülebilir turizm: Hindistan'ın seyahat ve turizm endüstrisinde yeni bir paradigma değişimi. *Anais Brasileiros De Estudos Turísticos* , *14* (1). https://doi.org/10.5281/zenodo.14577744.

El-Sohaimy, S. A., Brennan, M., Darwish, A. M., and Brennan, C. (2020), "Physicochemical, texture and sensorial evaluation of pasta enriched with chickpea flour and protein ısolate". Annals of Agricultural Sciences, Vol. 65 No.1, pp. 28-34, doi.org/10.1016/j.aoas.2020.05.005.

Ellis, A., Park, E., Kim, S., & Yeoman, I. (2018). What is food tourism? *Tourism Management*, *68*, 250–263. https://doi.org/10.1016/j.tourman.2018.03.025.

Everett, S., & Aitchison, C. (2008). The role of food tourism in sustaining regional identity: A case study of Cornwall, South West England. *Journal of sustainable tourism*, *16*(2), 150-167.

Gençkan, S. (1958), "Türkiyenin önemli nohut çeşitlerinin başlıca vasıfları üzerinde araştırmalar". Ege Üniveristesi Ziraat Fakültesi Yayınları Ege Üniversitesi Matbaası, İzmir.

Gaonkar, S., & Sukthankar, S. V. (2024). A factor-cluster approach in assessing residents' perceptions towards sustainable rural tourism development. *Latin American Journal of Tourismology*, *10*(Regular). https://doi.org/10.5281/zenodo.13629785

Gülümser, A., (1988), "Nohutun hasattan sonra değerlendirilmesi ve leblebi yapımı". Ondokuz Mayıs Üniversitesi, Ziraat Fakültesi Dergisi, Vol. 3, No. 2, pp. 251-260.

Gürsul, I., and Batu, A. (2010), "Geleneksel ve modern yönteme göre ağın leblebisi üretimi". Electronic Journal of Food Technologies, Vol. 5, No.1, pp. 57-65.

Halme, M. (2001). Learning for sustainable development in tourism networks. *Business strategy and the Environment*, *10*(2), 100-114.

Hall, C. M., & Sharples, L. (2004). The consumption of experiences or the experience of consumption? An introduction to the tourism of taste. In *Food tourism around the world* (pp. 1-24). Routledge.

Hallab, A.H., Khatchadourian, H.A. and Jabr, I. (1974), "The nutritive value and organoleptic properties of white Arabic bread supplemented with soybean and chickpea", Cereal Chemistry, Vol. 5, No.1, pp. 106–112.

Helbaek, H. (1970). "In excavation at hacilar", Mellaart, J. (Ed.)". The Plant Husbandry At Hacillar, Edinburgh University Press, Edinburgh, pp.189-244.

Hemeda, H.M. and Eman, F.M. (2010) "Functional attribute of chickpea and defatted soybean flour blends on quality characteristic of shortening cake", European Jornal of Applied Sciences, Vol. 2 No. 2, pp. 44–50.

Iwasaki-Goodman, M. (2017). Transmitting Ainu traditional food knowledge from mothers to their daughters. *Maternal & Child Nutrition*, *13*, e12555.

Jukanti, A. K., Gaur, P. M., Gowda, C. L. L., and Chibbar, R. N. (2012), "Nutritional quality and health benefits of chickpea (cicerarietinum) A Review", British Journal of Nutrition, Vol. 108, No. 1, pp.11-26, Doi: 10.1017/S0007114512000797.

Kobas, T. (2006), "Leblebi sektör araştırması". AB ve Uluslararası İş birliği Şubesi, TGDF (Türkiye Gıda ve İçecek Sanayii Dernekleri Federasyonu), İstanbul.

Köksel, H., Sivri, D., Scanlon, M. G., and Bushuk, W. (1998), "Comparison of physical properties of raw and roasted chickpeas (leblebi)". Food Research International, Vol. 31, No.9, pp. 659-665, doi.org/10.1016/S0963-9969(99)00042-3.

Lew, A. A. (2019). Tourism planning and place making: place-making or placemaking?. In *Tourism Planning and Development* (pp. 142-160). Routledge.

Lorna Hawtin, Linda Sears. (1993), Legume cookbook: cooking with chickpeas, faba beans and lentils. International Center for Agricultural Research in the Dry Areas, Beirut, Lebanon.

Merga, B., Haji, J. And Y., F. (Reviewing editor) (2019), "Economic importance of chickpea: Production value and worl trade", Cogent Food & Agriculture, Vol. 5: No. 1, pp. 1-12, Doi: 10.1080/23311932.2019.1615718.

Mısır, S. (2025). Sociocultural and Gastronomic value of Ardahan Kavılca Wheat: Rediscovery pf Local Products. International Journal of Gastronomy and Food Science, 101207.

Mrad, R., Assy, P., Maroun, R.G., and Louka, N. (2015), "Multiple optimizations of polyphenols content, texture and color of roasted chickpea pre-treated by IVDV using response surface methodology", Food Science and Technology, Vol. 62, No. 1, pp. 532-540, doi.org/10.1016/j.lwt.2015.01.013.

Mart, D., G. Öktem, M. Türkeri, D. Yücel, T. Karaköy, S. E. Dumlu, E. Atmaca, and N. Çankaya. (2019), "Evaluation of yield and morphological characteristics of registered chickpea (cicer arietinum l.) varieties in different regions." In World

Conference on Sustainable Life Sciences (Wocols, Science for Life), 30th June-07th July, (accessed 25 February 2024).

Müjdeci G., Kayalar F., Mehder G., and Kılıç F. (2021), "Investigation of chemical and microbiological properties of leblebi (roasted chickpeas) sold unpackaged in Çorum province", Türk Hijyen Derneği Biyoloji Dergisi, Vol, 78, No. 4, pp. 535- 544.

Okumuş, B., Okumuş, F., & Mckercher, B. (2007). Incorporating local and international cuisines in the marketing of tourism destinationa: The case of Hong Kong and Turkey. Tourism Management, 28(1), 253-261. https://doi.org/10.1016/j.tourman.2005.12.020.

Ortakçı, A. (2011), "şer'iyye sicillerinden hareketle 19. yüzyıldan 20. yüzyıla geçerken Çorum'da meslekler", Hitit Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, Vol. 4, No. 1, pp. 105-116.

Özaktan, H. (2021), "Bazı tescilli nohut çeşitlerinin elek analiz değerleri", Turkish Journal Of Agriculture-Food Science And Technology, Vol. 9, No.11, pp. 1953-1959.

Özbey, F., and Görgülü, M. (2016), "Survey of trace element and dietetic fiber composition of "leblebi" which is a local snack food consumed in Turkey", Food Science and Technology, Vol. 36, No.2, pp. 351-355, doi.org/10.1590/1678-457X.0114.

Özbey, F. (2017), "Effect of traditional processing steps on chemical and nutritional composition of leblebi", Acta Alimentaria, Vol. 46, No. 3, pp. 290-296, doi.org/10.1556/066.2015.7777.

Özbey, F. (2018). Tarihten Gelen Çorum Leblebisi, Çorum Belediyesi Matbaası, Çorum, Türkiye.

Özbey, F. (2022), "The Non-dairy probiotic potential of the prebiotic turkish snack "leblebi". Food Science and Technology, Vol. 42, No. e38321, pp. 1-10, doi.org/10.1590/fst.38321.

Özgen, I. (2015). Uluslararası gastronomiye genel bakış. M. Sarıışık (Ed), Uluslararası gastronomi (s.1-32) içinde. Detay yayıncılık.

Özdemir, G., & Altıner, D. D. (2019). Gastronomi kavramlari ve gastronomi turizmi üzerine bir inceleme. *Erzincan Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, *12*(1), 1-14.

Özer, S., Karaköy, T., Toklu, F., Baloch, F., Kilian, B., and Özkan, H. (2010), "Nutritional and physicochemical variation in Turkish kabuli chickpea (Cicer arietinum L.) landraces", Euphytica, Vol. 175, pp. 237–249, doi.org/10.1007/s10681-010-0174-3.

Pieroni, A., Nebel, S., Santoro, R. F., & Heinrich, M. (2005). Food for two seasons: culinary uses of non-cultivated local vegetables and mushrooms in a south Italian village. *International Journal of Food Sciences and Nutrition*, *56*(4), 245-272.

Pipan, A., & Gačnik, A. (2020). Role of cultural heritage in the development of gastronomy tourism in the rural area: Case of the Vipava Valley. *Agricultura Scientia*, *17*(1-2), 19-26.

Rachwa-Rosiak D, Nebesny E, and Budryn G. (2015) "Chickpeas—composition, nutritional value, health benefits, application to bread and snacks: a review", Criticial Reviews in Food Science Nutrition, Vol. 55, No.8, pp.1137-45, Doi: 10.1080/10408398.2012.687418.

Rivza, B., Foris, D., Foris, T., Privitera, D., Uljanova, E., & Rivza, P. (2022). Gastronomic heritage: A contributor to sustainable local tourism development. *GeoJournal of Tourism and Geosites*, *44*(4), 1326-1334.

Sağlam, H. and Seydim, A.C. (2020), "Effect of roasting temperature and time on some physical and sensory properties of roasted chickpea (leblebi), and kinetic studies of the changes in leblebi color", Harran Tarım ve Gıda Bilimleri Dergisi, Vol, 24, No. 2, pp. 140-150, doi.org/10.29050/harranziraat.647181.

Santilli, J. (2015). The recognition of foods and food-related knowledge and practices as an intangible cultural heritage. *Demetra: food, nutrition & health*, *10*(3), 585-607.

Sarmento, A., Barros, L., Fernandes, Â., Carvalho, A.M. and Ferreira, I.C. (2015), "Valorization of traditional foods: nutritional and bioactive properties of cicer arietinum l. and lathyrus sativus l. pulses", Journal Science Food Agriculture, Vol. 95, pp. 179-185, doi.org/10.1002/jsfa.6702.

Sims, R. (2009). Food, place and authenticity: local food and the sustainable tourism experience. *Journal of sustainable tourism*, *17*(3), 321-336.

Süzer, Ö., & Doğdubay, M. (2022). Sürdürülebilir Turizm Hareketliliğinde Yerel Gidalarin Önemi Ve Rekabet Avantaji (Kavramsal Bir Analiz). *Safran Kültür ve Turizm Araştırmaları Dergisi*, *5*(2), 255-269.

Scarpato, R. (2003), Sustainable gastronomy as a tourist product, Routledge. London, UK.

Simsek, S., Herken, E. N., and Ovando-Martınez, M. (2016), "Chemical composition, nutritional value and in vitro starch digestibility of roasted chickpeas", Journal of the Science of Food and Agriculture, Vol. 96, No. 8, pp. 2896-2905, doi.org/10.1002/jsfa.7461

Şahin, M., Odabaş, E., and Çakmak, H. (2022) "Kırık leblebiden elde edilen unun glutensiz erişte üretiminde değerlendirilmesi", Süleyman Demirel Üniversitesi Fen Bilimleri Enstitüsü Dergisi, Vol. 26, No. 2, pp. 260-267.

Şahiner, A, E. (2023), "Çorum leblebisi ve hediyelik kutudaki gezgin kent belleği imgesi", Motif Akademi Halkbilimi Dergisi, Vol.16, No.42, pp. 806-820.

Tekeli, S. T. (1965). "Ziraat Sanatlar" |. Ankara Üniversitesi Ziraat Fakültesi Yayınları: Ankara, 237. Yayın No.77477–480, 1965.

Türkay, O., & Genç, K. (2019). Gastronomi turizmi. M. Sarıışık (Ed), Tüm yönleriyle gastronomi bilimi (s. 211-235) içinde. Detay Yayıncılık.

UNESCO (2008). World Haritage İnformation Kit. Erişim Tarihi: 25.05.2025. http://whc.unesco.org/uploads/activities/documents/activity-567-1.pdf.

Van der Maesen, L. J. G. (1987), "Origin, historyand taxonomy of chickpea", Saxena, M. C. and Singh, K. B. (Ed.), The Chickpea, CAB International, Wallingford, pp. 11–34, 1987.

Vodenska, M. (2020). Factors for (Un) Sustainable Tourism Development. Central European Journal of Geography and SustainableDevelopment, 2 (1), 16-29.

Zhang, T., Chen, J., & Hu, B. (2019). Authenticity, quality, and loyalty: Local food and sustainable tourism experience. *Sustainability*, *11*(12), 3437.

CRediT author statement

Term	Definition	Author 1	A2
Conceptualization	Ideas; formulation or evolution of overarching research goals and aims	x	X
Methodology	Development or design of methodology; creation of models	x	x
Software	Programming, software development; designing computer programs; implementation of the computer code and supporting algorithms; testing of existing code components	x	

Term	Definition	Author 1	A2
Validation	Verification, whether as a part of the activity or separate, of the overall replication/ reproducibility of results/experiments and other research outputs	x	x
Formal analysis	Application of statistical, mathematical, computational, or other formal techniques to analyze or synthesize study data	x	x
Investigation	Conducting a research and investigation process, specifically performing the experiments, or data/evidence collection	x	x
Resources	Provision of study materials, reagents, materials, patients, laboratory samples, animals, instrumentation, computing resources, or other analysis tools	x	x
Data Curation	Management activities to annotate (produce metadata), scrub data and maintain research data (including software code, where it is necessary for interpreting the data itself) for initial use and later reuse	x	x
Writing - Original Draft	Preparation, creation and/or presentation of the published work, specifically writing the initial draft (including substantive translation)	x	x
Writing - Review & Editing	Preparation, creation and/or presentation of the published work by those from the original research group, specifically critical review, commentary or revision – including pre-or post-publication stages	x	x
Visualization	Preparation, creation and/or presentation of the published work, specifically visualization/ data presentation	x	x
Supervision	Oversight and leadership responsibility for the research activity planning and execution, including mentorship external to the core team	x	x
Project administration	Management and coordination responsibility for the research activity planning and execution	x	
Funding acquisition	Acquisition of the financial support for the project leading to this publication		

Source: reproduced from Elsevier (2022, s/p), based upon Brand et al. (2015).

Processo Editorial / Editorial Process / Proceso Editorial
Editor Chefe / Editor-in-chief / Editor Jefe: PhD Thiago D. Pimentel (UFJF).
Recebido / Received / Recibido: 21.11.2024; Revisado / Revised / Revisado: 22.11.2024 – 18.05.2025 – 27.05.2025; Aprovado / Approved / Aprobado: 25.10.2025; Publicado / Published / Publicado: 09.05.2026*.
[* Editorial note: article originally scheduled for publication in 2025, but published in 2026 due to disruptions in the editorial workflow associated with external factors, including the interruption of services provided by a third-party editorial support provider.]
Documento revisado às cegas por pares / Double-blind peer review paper / Documento revisado por pares ciegos.