### **Review Article**

### **Uyghur food culture**

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Uyghur food culture has a long history. It is rich in resources, with the strong characteristics of being "green" and healthy, and having high nutritional value. We analyze the development and current status of Uyghur food culture, and explore the value of developing this food culture's resources. Traditional Uyghur food culture formed with influences from many ethnic groups, and has evolved into an intangible element of cultural heritage. It has several components with different healthy and therapeutic functions and is widely utilized in local communities. Overall, Uyghur food is rich in nutrients and beneficial for health. We propose strategies to address issues associated with Uyghur food culture and cultural resources, and specific measures for the development of these resources.

Key Words: Uyghur food culture, ethnic food, industry resource development, traditional Uyghur food, history

#### INTRODUCTION

Food, clothing, housing, and other basic necessities are fundamental to life. Food and diet have been a vital part of human culture. Professor K. C. Chang, an anthropologist at the US National Academy of Sciences, has argued that the investigation of food culture is the best way to learn about the core of a culture.<sup>2</sup>

Food culture is an integrative concept encompassing the technology, science, art, customs, traditions, and philosophy involved in the acquisition, production, processing, and consumption of food.<sup>3</sup> It thus reflects material and spiritual features of a given culture. The exploration of ethnic food cultures may greatly aid the development and implementation of policies aiming to accelerate economic development, boost employment, cast off poverty, and enhance cultural communication at the local and global levels. The Organization for Economic Cooperation and Development reported that the food industry is among the 15 most popular industries in the new millennium.<sup>4</sup> Food products from indigenous cultures are gradually becoming an independent industry. The objective of this review paper is to present the history and current status of traditional Uyghur food culture, and to describe the diversity, nutritional value, and business opportunities associated with this cultural resource.

# TRADITIONAL UYGHUR FOOD CULTURE FORMATION AND RESOURCES

### Formation of traditional Uyghur food culture

The Xinjiang Uygur Autonomous Region is located in north-western China; according to scholar Ji Xianlin it is the only place where all four cultural systems in the world have merged.<sup>5</sup> Lewis Henry Morgan mentioned in Ancient Society that the key to the mystery of human civilization could be buried in Tarim Basin, and that numerous secrets would be unveiled if it could be found.<sup>6</sup>

With a population of about 10.5286 million, the Uyghur people rank fifth in size among minority ethnic groups in China. Most of the Uyghur population is distributed in Tarim Basin and the Tian Shan Mountain Range to the south, which are located in the Xinjiang Uyghur Autonomous Region.

Traditional Uyghur food culture belongs to the northwestern cultural region of China. The delineation of China's food cultural regions is based mainly on geography, major ethnic groups, local customs, and religious beliefs.<sup>8</sup>

The Uyghur people have been living in Xinjiang for centuries and have experimented with many types of food production, which has optimized diversification of their food culture. Today, a large number of Muslims live in Xinjiang. Uyghur food culture is thus at the core of the Xinjiang food culture, with standardized patterns and structures of Uyghur diet and eating habits serving as the cultural norm and as visible reflections of the characteristics of Uyghur diet and the Uyghur people. The principles, styles, and serving manners of Uyghur food culture have rich connotations and value.

The features of Uyghur food culture have formed in different historic stages, based on changes in the ecological environment and the development of the Uyghur ethnic group. Dietary components include main and subsidiary foodstuffs, beverages, and spices. <sup>10</sup> Changes in Uyghur food through time also reflect the influence of

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neighbouring cultures, such as Chinese, Greek, Persian, and Arabic cultures. The historic culture of the central plains of China has been a major source of influence, as reflected in the diets of both cultures.<sup>11</sup>

Archaeological data suggest that meat was the main component of the Uyghur diet at the time of their settlement primarily in the Mobei region (north of the Gobi Desert), with rice incorporated gradually into the diet thereafter. 12 Historical documents indicate that the Tiele people, an ancient ethnic group related to the Uyghur that lived in northern China, used utensils such as widemouthed round-bottomed bowls, cylindrical cups, and goblets, which fit well with the contemporary dairy- and meat-based diet of the Uyghur people. After their westward migration, they grew grains such as wheat, barley sorghum, and rye, and consumed horse, lamb, and goose.13 Chen Cheng, a traveller in the Ming Dynasty period, wrote in his book Xivu Fanzhi, Bieshibali (Western Records: Lost in Eight Miles) that locals reported that "people live on meat, and sometimes consume rice and wheat food, and seldom eat vegetables". 14 Thus, the Uyghur dietary structure and food production changed with the ecological environment, resulting in features that persist today.

# Brief introduction to components of traditional Uyghur food culture

Wheat products are considered to be the staple food of the Uyghur community. Subsidiary foodstuffs include mainly meat and fruits. Red and milk teas are the most popular beverages, and various spices are used in the processing of the main Uyghur foodstuffs.

Traditional Uyghur food is known for its diversity. Various grains, including rice, wheat, maize, and sorghum, can be used in daily food preparation. Wheat, in the form of flour, remains the most popular grain. It is used in foods such as nan bread, samsa (roasted stuffed buns), pitir-manta and manta (thin and regular stuffed buns, respectively), chuchure (stuffed dumplings with soup), ugre (soup with needle-shaped noodles), halva (sweet porridge, made mainly with corn flour and cooked with chopped turnip, onion, and tomato), huang mian (yellow noodles), lamb intestine stuffed with rice, steamed lamb lungs, toksun soman (fried pasta), suyuqax (soup with pasta), and *umaq* (corn porridge, made mainly with corn flour and cooked with chopped turnip, onion, tomato, and salt). Rice is used primarily to make Uyghur polo, a pilaf with fried mutton and carrots. The most popular subsidiary foodstuffs in the Uyghur diet are lamb, beef, and chicken; pigeon is consumed less frequently. These animal products are used to make dishes such as roasted lamb, kebabs, meatballs, mutton soup, boiled mutton with salt, mutton with nuts, lamb chop suey soup, and da panji (fried chicken with potatoes served on a large plate). Fruit components of the Uyghur diet include grapes, apples, watermelons, apricots, and figs, all of which are common in Xinjiang. They can be consumed fresh or dried. Commonly used local vegetables include onions, Chinese cabbages, potatoes, and green peppers. The most popular beverages are milk tea with salt and black tea. Homemade yogurt is also very popular. The main spices used by the Uyghur are black pepper, red

pepper, cumin, and chopped onion. Carrots, butter, honey, jam, fruit juice, yogurt, and horse milk are also used to enhance flavour.

Some typical foods have a long history in the arid Xinjiang region. Evidence of the consumption of roasted meat and kebabs, components of Uyghur food culture and typical foods of nomadic peoples, was discovered in 1985 at the Zha Hong Le Ke archaeological site in Qiemo County. The Divanu Lughat-it Turk (Encyclopaedia of Turkic Ethnic Group Languages), written by Mahmud Kashgari in the 11th century, also documents the consumption of roasted meat: it contains the words "enliqi" (a garlicky spice used particularly on roasted meat), "takelidi" (a verb meaning "to pierce meat with a stick"), and "suigulunchu" (a verb meaning "to roast meat in a pit", as is the famous Uyghur roasted lamb).

Nan bread is also a typical Uyghur food, the production and consumption of which can be traced back to the origin of the Uyghur culture. When Qiu Chuji, a famous Taoist of the Yuan Dynasty, travelled to western China, Huihu (ancient name for the Uyghur people) officials are said to have treated him generously in a small city near Beiting (ancient name for a western region), offering him (among many other foods) nan bread. Volume 1 of the Divanu Lughat-it Turk lists 14 types of roasted nan bread, and two additional types are mentioned in volume 3. At least 21 types of nan bread exist in Uyghur culture today.16 Thus, one can conclude that various processing skills have been applied in the preparation of nan bread over its 3000-year history. Nan bread has been found at ancient tomb sites.<sup>17</sup> The word "nan" originated in the Persian language and has been used widely in Arabia, Turkey and Asia Minor. Before the introduction of Islam into their territory, the Uyghur used the term "emek" for nan bread. In 1972, archaeologists discovered nan bread fragments in an ancient tomb. They determined that the bread was originally round, 19.5 cm in diameter, made of wheat flour, thin in the middle and thicker on the edges, with patterns on it; thus, it was very similar to the nan bread of today.<sup>18</sup> A similar discovery was made in 1996 in Qiemo County, Tarim Basin. Several fragments of thin nan bread were found in tomb no. 72. The fragments were  $\leq 0.2$  cm thick with diameters  $\leq 30$  cm. They were likely made sometime between the reigns of the Eastern and Northern and Southern Han dynasties, suggesting that nan bread had become a common foodstuff around 1400 years ago. 19 Nan bread and milk tea still comprise a typical Uyghur breakfast.

Beverage components of Uyghur culture include several kinds of tea, juice, *kawas* (a beverage made with honey), and *musallas* (a liquor). Most of these beverages are made using local materials and processing procedures, giving them unique tastes. However, tea plants, used to make the most popular beverages, cannot be grown in the arid climate of Xinjiang. Chinese tea entered the region along the ancient Silk Road, creating opportunities to establish many tea shops and develop novel milk, fruit, and herbal teas with local ingredients (i.e., dried fruits, vegetables, and other plants).

The Uyghur people developed a food production pattern based on agriculture, with livestock breeding and forestry components. The Uyghur food culture is characterized by this pattern.<sup>20</sup>

## THE VALUE OF DEVELOPING UYGHUR FOOD CULTURE RESOURCES

The Uyghur food tradition is multicultural, diverse, and nutritious; its components have many advantages.

#### Diversity of traditional Uyghur food

Traditional Food of the Uyghur People<sup>21</sup> lists more than 300 foods in 21 categories, including 26 types of polo (oily rice dish), 11 types of *manta* (steamed stuffed bun), 12 types of samsa (roasted stuffed bun), 11 types of shorpa (soup), 6 types of halwa (sweet porridge), 6 types of chuchure (soup with stuffed dumplings), 8 types of langman (stretched noodles) and 21 types of suyuqax (pasta soup). Based on cooking method and materials, Uyghur food can be classified as roasted (e.g., shishkebabs, samsa, roasted lamb, roasted nan bread, and roasted grilled fish), boiled (e.g., boiled lamb, langman, suyuqash, and polo), fried, or wheaten (e.g., oily pyramid and pitir-manta). Each kind of food can be further divided into many types according to appearance. For instance, volume 1 of the Divanu Lughat-it Turk lists 14 types of roasted nan bread, and two additional types are mentioned in volume 3. At least 24 types of roasted nan bread exist in Uyghur culture today.<sup>22</sup>

# Health benefits of the Uyghur diet from the perspective of food therapy

Health preservation through diet is a very important part of Uyghur food culture. It is closely linked to the concepts of traditional Uyghur medicine, which has long been practiced by the Uyghur people. This traditional medicine has four diagnostic methods: observation, smell, inquiry about an individual's background, and touch. Diagnosis based on the examination of urine, excrement, or phlegm is also common. Typical treatment methods are care provision by a nurse and the use of traditional herbs and therapeutic massage. Based on observation and exploration of the natural world, the Uyghur people identified four basic substances: fire, air, water, and earth. These substances have distinct features: fire is considered to be dry and warm, whereas air is humid and warm, water is humid and cold, and earth is dry and cold. These features (dry, humid, warm, and cold) are also applied to human bodies, and health is believed to depend on the achievement of balance among them.<sup>23</sup>

The objective of traditional Uyghur food therapy is to prevent and treat diseases using local foodstuffs and proper integration of traditional foods. Suggested diets are tailored to individuals. As recorded in the *Kutadgu Bilig (Wisdom of Royal Glory)*, food that is cold in nature should be consumed when the body's nature is overly warm and vice versa. Food that is cold in nature is recommended for young people because it is considered to aid blood circulation, whereas food that is warm in nature is considered to be better for people in their forties. Exclusively warm food is recommended for those over 60 years of age. Thus, one must know his or her body's nature and learn to balance it with the appropriate type of food. The Uyghur people practice food therapy in daily meals.

Animal studies have shown that Uyghur nan bread is rich in nutrients such as vitamins, protein, fat, and starch, which have curing effects on poor digestion, abdominal distension, and gastrointestinal dysfunction. Sweet flat bread is considered to be a drug in traditional Chinese medicine. Lamb, the most frequently consumed meat in Uyghur culture, is rich in nutrients and minerals such as protein, vitamins, calcium, phosphorus, iron, and fat. In traditional Uyghur medicine, onion is considered to be warm in nature, slightly bitter, and spicy in taste, thus helping to maintain one's constitution and improve fitness. Regular consumption of onions can aid the maintenance of stomach and spleen health, eliminate phlegm, and improve blood circulation. When absorbed in the human body, the trace element selenium, found in onions, has an anti-tumoral effect, hindering the growth and spread of cancer cells. Some reports have suggested that regular consumption of onions reduces the risk of cancer by 25%.<sup>24</sup> From a pharmacological point of view, onions counteract the effects of the fat in mutton, reducing the risk of hyperglycaemia.

### Uyghur food is highly nutritious and well balanced

Xinjiang is one of five regions in the world famous for macrobian inhabitants. The Uyghur people pay serious attention to their health and value a healthy diet, which is believed to have a significant role in maintaining fitness. A healthy diet is usually considered to contain grains, meats, vegetables, fruits, and dairy products, which provide necessary energy and nutrition to the human body. The Uyghur diet contains ample fruit, meat, and dairy products for this purpose.

Meat is a very important ingredient in Uyghur food. It is often cooked with vegetables such as carrots, onions, celery, and other green vegetables. People who consume the Uyghur diet have been shown to have less hyperlipidemia and hypertension than Han people. 25,26

The Uyghur people have developed dishes such as *polo* (rice cooked with carrots, meat, and onion) that are considered to provide sufficient nutrition. People in Layisu Village, southern Xingjiang, which is famous for its macrobian inhabitants, often eat a nutritious type of *nan* bread made with corn flour and containing onions and carrots; they sometimes eat dried fruits at the same time, which contribute to the nutritional value of the meal. They drink water from Kunlun Mountain, which is thought to be rich in minerals such as iron, magnesium, manganese, zinc, and calcium.

### Uyghur food culture is part of a rich tradition

Traditional Uyghur foods include green vegetables, domestic animals, water, herbal products, dietary habits, customs, festivals, and religious activities. The distinct character of this food culture is a result of local products, climate, and natural resources, as well as the influence of traditional Han Chinese and other cultures. Typical Uyghur foods include kebabs, *nan* bread, *polo*, *langman*, *muselles*, and *kawas*. The original Uyghur music and dance performed at any Uyghur banquet is also part of this traditional culture. Thus, the exploration and development of traditional Uyghur food culture would be worthwhile.

# STRATEGIES FOR DEVELOPING UYGHUR FOOD CULTURE RESOURCES

All cultural resources, if developed properly, would benefit local economies greatly. However, the development of Uyghur traditional food culture resources faces many challenges, such as the failure to implement updated management models; the lack of leading enterprises in local food industries; and the lack of brand awareness, professionals, and standardized production lines. The dining environment and service quality could also be improved.

### Take full advantage of traditional Uyghur food culture

The incorporation of Uyghur culture into traditional Uyghur food adds an artistic concept to food preparation and service. This approach would be a very wise way to open a path to the establishment of a unique brand in food and service. Food culture should be categorized by region and characteristics; products reflecting the original features of the local culture should be explored. In addition, opportunities should be provided to discover, appreciate, and get involved in the originality of Uyghur food.

### Integrate traditional Uyghur food culture into food tourism

Food tourism refers to travel for the purpose of enjoying beautiful scenery and tasty food together. This form of tourism is currently popular and should be further promoted. Many studies have shown that the opportunity to sample tasty food impacts tourists' choice of travel destinations. For example, many tourists visit France, Italy, and Thailand not only to see the abundant sites of interest, but also because of the charm of the food at these destinations. However, food tourism has not received sufficient academic attention. Tourism projects involving food therapy activities and food festivals might be good means of exploiting and developing traditional Uyghur food culture resources.

#### **Develop therapeutic food tourism**

Health preservation is one motivation of touristic activities, and traveling for health purposes is an important trend in tourism. Tourism focused on food therapy is thus poised to become one of the next new foci that complement sight-seeing, vocational, and experience-based tourism. Xinjiang would be a very good destination for domestic and international tourists, who could enjoy beautiful scenery and healthy local food with proven therapeutic effects on some diseases. However, detailed market investigations and analyses are needed to guide the development of therapeutic food tourism. Experts and dietary technicians in relevant medical fields could be consulted to determine the medicinal effects of traditional Uyghur food. For instance, according to the Food Inspection Center of Xinjiang Agricultural University, the local liquor muselles is rich in vitamins and minerals, such as iron, potassium, and sodium, which help to soothe nerves and improve qi and blood circulation. Tourists could visit muselles factories to experience the production of this liquor.

#### Develop experience-based food tourism

Tourists visiting Xinjiang would have the chance to enjoy great local food and become immersed in a totally fresh culture, where they could completely satisfy their needs. For example, an exhibit about Uyghur *nan* bread would provide visitors the opportunity to learn about the types, production, and cultural background of this traditional food. Uyghur folk customs, such as antiphonal singing at traditional wedding ceremonies, could also be presented to tourists. Exposure to local architecture, public facilities, and traditional costumes could also complement the development of local food culture tourism.

#### Establish a food festival

The organization and hosting of a food festival in Xinjiang might contribute greatly to local tourism promotion. Food expositions could be held to present delicious local food to the public. Such events would also facilitate the introduction of high-quality local hotels and food industries to tourists, while enhancing and aiding the preservation of the local culture.

## Develop branded products and services within Uyghur food culture

A brand is a name, term, symbol, design, or combination thereof that defines a seller's products and differentiates them from competitors' products. The 21st century is an age of brands. The establishment of brand awareness related to Uyghur food culture would represent a breakthrough in the local tourism industry, and should be supported by governments at all levels to encourage the establishment of successful local food businesses, such as Miraj, May Flower, and Mamut Stuffed Buns. Brand development and reputation building in local food industries is inevitable, and may require the immersion of local culture into management. Food industries should be characterized by professional production, scaled supply, and chain-oriented and scientific management.

# Accelerate studies of food culture resource development and establish Uyghur food culture museums

The establishment of a museum for the preservation and presentation of traditional Uyghur food culture is essential. As the major function of a museum is to preserve history and enlighten visitors about the future, a Uyghur food culture museum should have three main components: (1) models of typical Uyghur utensils, a display of foods throughout Uyghur history, and introductory text; (2) displays depicting customary Uyghur diets from different regions within Xinjiang; (3) and displays of literature and art related to traditional Uyghur food. The establishment of such a museum could make learning about traditional Uyghur food culture accessible to tourists.

#### Engage the young generation

With recent rapid economic development, Uyghur foods are becoming increasingly diversified, with the addition of exotic foods from outside the region and country. These changes, along with modernized food services such as catering for weddings, parties, meetings, and business activities, are increasingly welcomed by the young generation. The development of an internet-friendly component

of the traditional Uyghur food culture is essential to attract the young generation of consumers. The evolution of Uyghur food culture from the family dining to the community dining setting is changing the way the next generation enjoys this food, and plays an important role in preserving this tradition and improving its acceptance and expansion.

#### **CONCLUSION**

Traditional Uyghur food culture formed over a long period of time, with influences from many ethnic groups, and has evolved into an example of intangible cultural heritage. It has several components, such as special diets, drinks, and performances. The health and therapeutic functions of Uyghur food have been well documented and widely utilized in local communities. Scientific research has also shown that the food is rich in nutrients and beneficial for health. Further study of this food culture would contribute greatly to the promotion of its distinct features and brand awareness in the Xinjiang food industry. Here, we have proposed several strategies to enhance the impact of this food culture, including maximizing publicity, incorporating this culture into tourism activities, and building a strong market presence through industrialization.

#### **AUTHOR DISCLOSURES**

The authors have no conflict of interest.

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