AGROBIODIVERSITY AND TRADITIONAL PRODUCT MAPPING INVENTORY:
SHAMAKHI, ISMAILLI, SHAKI, GABALA AND GAKH DISTRICTS OF AZERBAIJAN

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This working document is intended as an initial inventory of products with characteristics that strongly link them to the territory of reference. The attention is on the food and farming heritage of the territory, domestic species, wild species, and processed products, and generally on products with a strong identity, the presence and production of which are traditional and characteristic of the specific territory in question. As a result of the mapping exercise, local products and food chains that are at risk of disappearing can receive special attention.

The local dimension of food products, based on a strong relationship to a particular territory and the culture of a rural community, is central to mapping activities carried out according to the Slow Food vision. Thus, the mapping started with a contextual review of the pilot areas, namely Shamakhi, Ismailli, Shaki, Gabala, and Gakh districts. In the Territory Data Sheets, the common and distinctive properties of the districts (geographical, climatic, agricultural, organizational, etc.) were reported. The Territory Data Sheets were used primarily to identify all the aspects of socio-economic and production contexts that might be important for enhancing knowledge of the selected food and farming heritage products. The Data Sheets are also helpful for the horizontal analysis of surveys carried out in similar territories.

A preliminary list of products was developed based on literature reviews and interviews with relevant stakeholders. For this purpose, the following reports have been used: (i) “Country Report on the State of Plant Genetic Resources for Food and Agriculture Azerbaijan”, FAO, 2006; (ii) “State Service for Registration Plant Varieties and seed control under the Ministry of Agriculture of Azerbaijan registration and control over plant breeds”, Azerbaijan Republic Ministry of Agriculture, 2018; (iii) Aslanov, A., Azerbaijani World of Plants, Tea Press, 2010; (iv) the Scientific Research Institute of Livestock under the Ministry of Agriculture, Collection of papers, 2018; (v) reports of relevant international projects.

The next step was to develop an inventory of products with characteristics that strongly link them to the pilot areas. For this purpose, two field trips were carried out. During the first field trip, in December 2018, traditional food chains were identified, and the preliminary mapping list was updated. Regional stakeholders were identified and interviewed to help in the identification of local food chains. The main output of the field trip was the developed list of local domesticated varieties, breeds, and food products that are part of the traditional food chain and involve local producers operating in a specific territory.

The second field trip took place in January 2019 with the aim of contacting specific manufacturers of products identified during desk research and the first field trip, and interviewing stakeholders who were not available during the December visit. Each breed, variety, and product identified has been described in a precise data sheet that summarizes all of the information gathered, starting from the characterization of the species, varieties, and breeds, and with detailed information on the origin and distribution, the primary use and main characteristics in terms of food preparation, circulation in the territory, potential marketing aspects, and everything concerning nutritional aspects (if known). Information from these data sheets provided the content of this document.
Finally, during the field trip taken by the Slow Food team with local and international biodiversity consultants, meetings and interviews took place with several producers of the products from the preliminary mapping list. As a result, the product descriptions were enhanced and several newly identified products were added to the inventory.

This inventory represents a working document and should not be considered exhaustive of the full potentials of each territory; additional products, varieties, and breeds will be investigated and integrated throughout the project timeline.

A brief description of the agricultural heritage of the project area

The project area includes five pilot districts in the Shaki-Zaqatala and Daglig-Shirvan regions:
Local communities in the mountainous territories of Azerbaijan’s Greater Caucasus are characterized by the complex and specific structure of their association with natural economies and cultural traditions, and the ethnolinguistic composition of their populations. In these areas, the residents of a given village may belong to one or several ethnolinguistic groups. Depending on the area, Azerbaijani, Avar, Lezgin, Russian, Dargin, Tat, Kurdish, and Udi populations are interspersed differently. District centers and urban-type settlements in particular are of mixed ethnic composition.

Local communities in mountainous areas can be divided into groups according to their primary activities. For example, livestock (sheep, cattle, etc.) was most often raised to satisfy the internal needs of the community and the household demand for meat, dairy, wool, and leather. The production of wool led to the development of carpet weaving, which allows families to earn additional income.

Based on their primary activities, local communities can generally be divided into the following types:

1. Horticultural communities, which are divided into farms cultivating:
   - nut crops (walnuts, hazelnuts, chestnuts)
   - fruit and berry crops (apples, pears, apricots, peaches, etc.)
   - citrus and subtropical crops
   - grapes

2. Grain-growing communities, producing crops such as wheat, corn, and rye

3. Potato- and vegetable-growing communities, which produce mainly potatoes but also cabbage, onions, tomatoes, etc.

4. Livestock-based communities, which raise mainly sheep and, to a lesser extent, cattle and other animals.

The mapping process revealed that the majority of traditional food products are produced in limited quantities by households and small-scale farmers, mainly for their own needs or for supplying their neighbors. For example, in almost every village there are families farming Azerbaijan buffalo and bee hives with gray Caucasian bees. Almost all home orchards contain an albukhara plum tree, the fruits of which are widely used in national cuisine, both fresh and dried. Karabakh sheep are present in virtually every village, which is not surprising given that lamb meat is an integral part of many national dishes.

Some foods are historically associated with manufacturers from specific areas. For example, sweets from Shaki and Shamakhı differ from each other and from sweets in other parts of Azerbaijan. The distinctiveness of these products derives not from the local components, but from the unique methods for making sweets that have been passed down from generation to generation. These products are now facing competition from international brands.
SHAMAKHI DISTRICT

This district is the center of ancient Shirvan, the former state of the Shirvanshahs and a historical region in the southeastern foothills of the Greater Caucasus (the area covers 1,611 km² and has a population of over 90 thousand people). The population is mostly Azerbaijani, though some other groups are also present. For example, the village of Chukhuryurt on the right bank of the Pirsat River is inhabited by Molokans from Russia.

Shamakhi is mostly mountainous, with a maximum elevation close to 2,500 meters above sea level. The landscape varies from steppe to foothill meadows and forests. The climate of the region is moderately warm, and summers can become very hot, with temperatures sometimes exceeding 40°C. The soil of the region is fertile, providing for rich flora and fauna. Shamakhi District used to be the largest center of Azerbaijani viticulture. Mountain villages are famous for carpet making. In recent years, this region has become a popular tourist destination.

There are important natural sights in the area, such as the Pirgulinsky State Nature Reserve, which has an area of 1,521 hectares, of which 1,362 are forested. The flora of the reserve includes 45 rare and endemic plant species, many of which are listed in the Red Book of Azerbaijan. The Dzhanginsky forest is home to wild apple, pear, and cherry plum trees. A wide variety of wild plants and forest trees play a very important role in the local ecosystem, even if they are not part of the agrobiodiversity cultivated by farmers.

Grapes

MADRASA GRAPE

Scientific name: Vitis vinifera
Other common names: Matrasa, Madrasa, Medrese
Local name: Madrasa

History and production area: This local red grape variety belongs to the ecological-geographical group of eastern varieties. It is a local variety widely spread in the historical Shirvan region. The clone is named after the village of Madrasa. In the 1870s-80s, there were 50 thousand hectares of vineyard planted with this variety. Today, the area cultivated with Madrasa in Azerbaijan has decreased significantly. This variety is also distributed in Dagestan and in the republics of Central Asia. Most of the local grape varieties in Azerbaijan are derived from wild grapes. As a result of natural and artificial selection, a rich array of local varieties of various economic importance was created. Wine is mentioned on the lists of products exacted as tax from the people of the northwestern Median Empire. In 714 B.C., during the arrival of Sargon II, the Mannaeans greeted his warriors with flour and wine. Archaeological excavations in the territory of ancient Azerbaijan have shown that the juice of grapes was squeezed in stone baths. Special vessels with long grooved drains located to the left of the handle found in burials in Shamakhi also speak to the presence of ancient winemaking. According to the Brockhaus and Efron Encyclopedic Dictionary, much of the population of Shamakhi was engaged in viticulture in the early 20th cen-
tury, with the center of winemaking in the village of Madrasa. Grapes were used for winemaking, distillation, and the production of condensed juice (bekmes). In 1901 there were 1,631 ha of vineyards in Shamakhi. In the 1980s, the State Committee for Viticulture of Azerbaijan ranked first in the USSR in terms of earnings, ahead of the oil industry. During that time the Madrasa vineyards covered 23,000. In 1985, as a result of the anti-alcohol campaign, Azerbaijan was forced to remove vineyards and more than 130 thousand hectares were uprooted.

**Description:**
The vines grow normally and rapidly. The variety is self-fertile. About 150 days pass between flowering and harvest. The leaves are palmately lobed and toothed. The variety is characterized by weak leafiness (long internodes). The first leaves of a young shoot are light green, with a light bronze tint and weak pubescence. The young leaves are flat with downward-curving edges and gradually subsiding pubescence. One-year-old shoots are grayish brown with dark nodes. Mature leaves are of medium to large size, rounded, deeply dissected, and 5- or 7-lobed (sometimes 9-lobed). The grape clusters are medium to large (14–20 cm long, 12–14 cm wide, and 85-145 g), broadly conical, and of medium density. The grapes are medium-sized (12-16 mm long, 11-14 mm wide) and slightly oval. They are dark blue with a thick waxy bloom. The skin is of medium thickness and tears easily. The flesh is greenish and juicy with a harmonious taste and the juice is slightly colored. The average weight of 100 berries is between 100 and 140 g. This variety is vulnerable to powdery mildew, gray rot, and leaf worm. In years with adverse weather conditions during flowering, the grape variety is prone to shedding the ovary. It is not resistant to frost but is relatively drought resistant. Harvest period: Full ripeness occurs at the beginning of September in Shamakhi. Harvesting occurs late September and early October, depending on the type of wine being prepared. The yield exceeds 4-5 tonnes per hectare, or 9 tonnes per hectare if high-grade agrotechnology is used.

**Quantity produced, distribution, and market:** Currently, the Madrasa grape variety is grown in several villages in Shamakhi and Ismailli districts. Generally, small-scale producers dedicate up to 5% of the vineyard to Madrasa, to sustain the variety and make wine for their own consumption, but mainly grow imported varieties that yield more. Bigger producers grow Madrasa as well. The village of Ivanovka in Ismailli, which is inhabited by Molokans and is the only remaining functional kolkhoz (collective farm of the Soviet period), has cultivated Madrasa vines since 1956. The vineyards once covered 470 ha but, due to gradual vine degeneration, now cover only 290 ha. The grapes are sold to Absheron Sharab winery in Baku, which produces a wine called İvanovka Bağları 1954, made of 100% Madrasa. The locals of Ivanovka also use this variety for producing homemade wine and juices.

**Preparation and consumption:** High-quality table and dessert wines are made from this red grape variety. The wine is highly extractive and is used in blends. Varietal Madrasa wine is among the vintage wines that make up the so-called “golden fund” of the ancient Azerbaijani winemaking tradition. The noble drink is distinguished by its unique taste and aroma. It is worth noting that the Madrasa grape is distinguished by its vitamin and mineral composition.
Cakes, pastries, and sweets

BLACK KHALVA OR WHEAT SPROUTS KHALVA

Local name: gara xalva

History and production area: Traditionally, black halva was produced once a year, exclusively for the spring holiday of Novruz, in the mountain villages of Damirchi (Shamakhi District) and, 18 km away, Lahij (Ismailli District). This family tradition is believed to be rooted in the Zoroastrian religious tradition of growing wheatgrass for Novruz.

Description and production: This is a traditional khalva-type sweet in the form of balls or cutlets (flattened egg shape), distinguished by the brown-black color due to the use of wheat sprout juice. The seeds of local wheat varieties are germinated in a tray for 15-20 days, then chopped (traditionally with a handheld blade, now with a mincer) and squeezed through gauze. The juice and whole wheat flour (locally produced and watermilled) are put into a copper container and an equivalent amount of baked butter (made from local cow's milk yogurt in a traditional swinging wooden device) is added, then boiled for 10 hours and constantly stirred with a long-handled wooden paddle (the whole family is continuously engaged). Spices (cinnamon, pepper, ginger, carnation, cardamom) are added one by one while stirring. Then the mass is cooled and local multiflower honey (traditionally) or sherbet (sugar syrup, contemporary technique) and a mix of smashed hazelnuts and walnuts are added. The cooled mass is shaped by hand into balls or cutlets, which are rolled in sugar to prevent them sticking to one another. Black halva is consumed as a sweet with tea. It can be stored in a dry, cool place for up to 2 years.

Quantity produced, distribution, and market: Each family produces black halve for their own consumption and to give as a gift. Despite the evident increase in tourism in Damirchi village, just a couple of families produce black khalva to sell year-round in markets and specialized shops in the touristic areas. Several others produce it only for known consumers, and exclusively via a 3-week pre-order (due to the time demands of the recipe).

SUJUK

Common name: sweet jelly

History and production area: This sweet product was famous in the Middle Ages at the court of Shirvanshah. Sujuk is an Azerbaijani dessert loved by both adults and children. This recipe is handed down from generation to generation. It is traditionally prepared using local wheat or rice starch (nishast) and walnuts from the local forest.

Description and production: Wheat is warmed in water for 3 days to obtain starch. The starch is then mixed with water in a pot and stirred over a fire until the mixture boils. At first, the liquid looks like milk; then it becomes viscous. It must be stirred continuously at a gentle boil for 15-20 minutes. At the end of this process, honey, sugar, and saffron are stirred in and crushed nuts are added. Then the sujuk is poured into a deep plate. It can be eaten hot or cold. Sujuk can be stored in the fridge for 2 days.

Distribution and market: Sujuk is traditionally homemade for family consumption and sold in bakeries and pastry shops.
KULCHA

**Common name:** sweet bread

**History and production area:** This sweet bread was famous in Shamakhi from the Middle Ages. The product, which has Persian roots, is also well known in Tajikistan. In Azerbaijan, kulcha is a common flatbread served for iftar (the evening meal during Ramadan).

**Description and production:** Kulcha is one of national bread dishes prepared on Novruz and other holidays. Sometimes it is called “milk bread” because milk is used in its preparation. Turmeric adds a nice color and distinctive taste, and cumin also contributes to the flavor. To prepare kulcha, yeast is placed in a cup of milk and left to rest for 5 minutes. Coarse flour, powdered sugar, salt, and syrup are mixed together and then the yeast mixture is added, along with a cup of milk, an egg, and butter, and then the resulting dough is kneaded. The dough should not be too tight, but at the same time should not be sticky. The dough is covered with a towel and put aside for about 2 hours. When it is ready to bake, the dough is glazed with a beaten egg and decorated with seeds, sprinkled in a petal pattern. It is cooked in the middle of the oven for 30-35 minutes. The bread should cool before being removed.

**Distribution and market:** It is made in households for family consumption and sold in sweets shops.

Mushrooms

TOMBOLAN

**Scientific name:** genus Terfezia

**Common name:** dombalan

**History and production area:** The tombolan is an edible kind of “steppe truffle” (genus Terfezia) that grows in Southern Europe, North Africa, and Southwest Asia. In Azerbaijan, it can be found in Shamakhi District and on the Absheron Peninsula.

**Description:** This truffle is the tuberous, fleshy body of a fungus that grows wild in foothill meadows with low-grass. It is sub-globose, hemispherical, or pear shaped, and 3-10 cm in diameter. Its base is covered by a mycelial network that ends in a large rhizomorph. The peridium (skin) is 2-3 mm thick; its surface is initially smooth and white with black spots; it then becomes pink and darkens with age, eventually turning brownish black and cracked. The gleba (inner spore-bearing mass) is initially white and then turns pink. The veins that run between the fertile part of the gleba become more evident over time. The smell is not strong and the taste is pleasant.

**Harvest period:** September

**Quantity produced:** 20-150 kg/year (volume decreases each year due to changing climatic conditions).

**Distribution and market:** After being collected by the local population, the fresh product is sold in local markets, in fairly limited quantities.

**Preparation and consumption:** Tombolans are washed thoroughly with plenty of water and fried with
onions, salt and pepper, and eggs. For a gourmet dish, you can fry some potatoes separately and then add them to the eggs.

Fruit, nuts, and fruit preserves

COTONEASTER

**Scientific name:** Cotoneaster integerrimus  
**Local name:** dovsgan almasi  

**History and production area:** Cotoneaster grows wild in rocky and forested mountainous areas of Shamakhi, especially in the villages of Sis and Qaleybugurd. The name “cotoneaster” comes from Latin and means “resembling a quince”; this is because the cotoneaster has quince-like leaves. The genus includes more than 100 species, which are found in Eurasia and North Africa. The cotoneaster is valuable because it has a very beautiful appearance, and therefore is a worthy decoration in any garden.

**Description:** Cotoneasters are deciduous or evergreen slow-growing shrubs or small trees. The common cotoneaster (Cotoneaster integerrimus) is a deciduous shrub that grows to a height of about 2 m. The leaves are 1-4 cm long and oval shaped; their upper side is dark and, when young, slightly pubescent, while the underside is gray or whitish. The petiole is 1-4 mm long. Flowering usually occurs in June, and the blossoms are white or pale pink and very small. The ripe fruit is red and has a length of 7-11 mm; it contains two or three seeds.

**Harvest period:** August  

**Nutrition:** Cotoneaster is rich in vitamin A and iron. It helps to regulate cardiovascular function, increase appetite, and eliminate blood glucose. Cotoneaster usually attracts birds with its non-poisonous fruits, which contain ascorbic acid in large quantities, as well as anthocyanins and phenolcarbons. The leaves of the plant contain many acids and vitamin C. In addition, scientists have found low levels of glycosides in cotoneaster. The young shoots, fruits, and leaves of the common cotoneaster are used in traditional medicine. Cotoneaster resin has been used successfully to treat scabies and eczema. The fruits are used to treat diarrhea, flatulence, and dysentery, and can restore impaired metabolism. They are very useful for patients with epilepsy, neurosis, hysteria, and nervous fatigue. Cotoneaster is useful for people who suffer from diseases of the gastrointestinal tract. According to the recommendations of herbalists, the shrub can be used to make water preparations that can cure serious liver diseases. Cotoneaster leaf decoction is an excellent diuretic. A decoction of branches, immature fruits, and leaves is effective against diseases as serious as jaundice.

**Quantity produced:** It is mainly a wild plant and local people collect the fruits.

**Preparation and consumption:** The fruits of the cotoneaster do not taste excellent, but are very useful, so they are used when preparing tinctures and wines. Dried cotoneaster berries are used for various purposes. After drying the fruit, you can make a powder to be added to flour when making gingerbread. In addition, this powder is used in the manufacture of sweets and pastes. This plant is still poorly understood by scientists, so adverse effects may occur in people who are intolerant to its composition.
ISMAILLI DISTRICT

Ismailli District is located on the southern slope of the Caucasus Mountains. It covers an area of just over 2,000 km² and is home to over 84,000 people. Azerbaijanis are the majority, though Tats, Armenians, Russians, and Lezgins are also present. A number of villages are notable for their ancient history.

Although it is a mountainous area (its highest peak, Babadag, rises to 3,629 meters above sea level), much of Ismailli has a mild to subtropical climate. The plains and foothills and warm and the mountainous areas have a cold tundra climate. Almost half of the district’s land is used in agriculture, with winter pastures covering 10% and summer pastures covering 7%. Fruits and vegetables are widely grown. Woodlands account for over a third of the territory. The district contains the Ismailli State Reserve and part of the Shahdag National Park. Extremely picturesque mountain slopes, abundant wildlife, a generally mild climate, and cool mineral springs make the district an attractive area for recreation and tourism.

Vegetables and vegetable preserves

ISMAILLI GARLIC

**Scientific name:** Allium sativum

**Local name:** Ismayilli sarimsaqi

**History and production area:** Ismailli District, and specifically Ivanovka village, is the historical production area of this garlic variety, which may have been brought by the first Molokans displaced from Russia in 19th century, who founded the village of Ivanovka in 1846. This type of garlic was produced in the kolkhoz of Ivanovka ever since its establishment. During the Soviet period, most of the harvest was exported to Hungary, for use in sausage production, in exchange for imported clothing. After the collapse of the Soviet Union, the cultivated area was halved and continued to shrink. The garlic is cultivated only by hand. Young people are leaving the village and kolkhoz, so there is lack of people to process the garlic and continue its cultivation. In the last few years this traditional garlic has started to face competition from Chinese garlic, which is larger and more productive but less fragrant.

**Description:** Ismailli garlic is usually white but the bulb can also be yellowish or pink. It has an unobtrusive but persistent aroma and intense flavor. The bulb is round, somewhat flattened, and small (2.5 cm). This garlic is propagated vegetatively.

**Harvest period:** July

**Quantity produced, distribution, and market:** This garlic variety is cultivated only by the habitants of Ivanovka, who produce about 1 tonne/year.
Preparation, consumption, and preservation: The local population uses this garlic for pickling and as a seasoning in many different traditional dishes, such as sausages. Some growers in Ivanovka plant the garlic 1 month late and harvest it before the head has divided into cloves; this has turned out to be very good for salting. For pickling, the garlic is harvested when the skin is still young and thin; it is cleaned and put into barrels or glass jars. Pure water and salt (2 tbsp per 3 liters of water) are added. After a couple of months, vinegar from the local Madrasa grape variety is added to the brine so that the garlic will keep its crunchy texture for months. Pickled garlic can be stored for several years in a dry and cool place.

**RUSHANKA ONION**

**Scientific name:** *Allium cepa*

**History and production area:** This variety is named after the village of Rushanka, and is also cultivated in home gardens in nearby villages, including Ivanovka. The onions grown in Rushanka are particularly disease resistant.

**Description:** The Rushanka onion is a locally selected shallot variety with small, elongated purple bulbs that weigh 25-75 g. It has a sharp, sweet-and-spicy flavor.

**Product distribution and market:** only for self-consumption

Preparation, consumption, and preservation: Rushanka onion is mostly used fresh in salads, or eaten on its own, chopped and dressed with pomegranate juice. It stores well.

**IVANOVKA SUNFLOWER OIL**

**Scientific name:** made from genus Helianthus

**History and production area:** This is a traditional product of Ivanovka, a village of Molokans who rejected conformity and were forced to leave Russia in the 19th century. The oil-making plant in Ivanovka was founded in 1920, at a time when the Molokan artels (cooperatives) functioned (the equipment was brought back in 1897). Since that time, oil has become the hallmark of the village and the collective farm.

**Description and production:** During Soviet times, the peredovik sunflower variety, which has pale seeds with white stripes, was cultivated; recently, a variety called maslyanka (“oily”) has become more common. Sunflower seeds are harvested with a combine and then scattered in a storage area where a tractor with a special wooden comb turns them over. The seeds are then brought to the mill. Once the husk is removed, the seeds are crushed into dough that passes through 200-kg granite millstones and a press to separate the oil from the “cake”; the leftover solids are fed to cows to give their milk a deeper taste and greater fat content. The oil is brownish in color, dense, and has a very distinct aroma.

**Harvest period:** October

**Quantity produced, distribution, and market:** The production capacity is 18 liters/hour and up to 150 kg/day. Sunflower oil from Ivanovka is famous all over Azerbaijan and is in demand both for cooking and for medicinal purposes. Unfortunately, as demand rises, so does the quantity of counterfeit product: Ivanovka oil is cut with normal...
refined sunflower oil and sold as Ivanovka oil at lower prices. **Preparation and consumption:** Ivanovka sunflower oil is mainly used for seasoning salads and is also very good in baking (it goes into the local bread). The dish that many locals remember from childhood is local bread (made with flour milled from a mixture of wheat varieties grown in the collective farm fields and processed in a watermill) with sunflower oil and chopped white garlic.

**Honey**

**MOUNTAIN HONEY**

**History and production area:** This honey comes from different places at various elevations (depending on the season and the weather) around Ismailli District and parts of Gabala District. The gray Caucasian honey bee (Apis mellifera caucasia) lives in the Caucasus Mountains of Georgia, Armenia, and Azerbaijan. This region has a mild and humid climate and the bees feed on the many different plants that grow in the mountain valleys.

**Description:** Gray Caucasian bees are easily recognizable due to the silver-gray color of the hair on the body and the absence of yellow spots. They have a very long proboscis (6.70-7.25 mm), which allows them to collect nectar that other species cannot reach. Caucasian bees are very enterprising in their search for honey plants and are remarkably productive: Even with a relatively low supply of nectar, they are able to produce a decent amount of honey. These bees are very calm and continue to work even when the beekeeper is inspecting the hives. In Ismailli these bees produce linden honey, which is characterized by a light yellow or light amber color. Honey from small-leaved linden flowers growing in the forest-steppe zone of Ismailli has a strong aroma with a slight bitterness, while the honey from large-leaved lindens, common in the southern part of the country, is more delicate. The bees also make honey from acacia, thistle, verbena, esparcet (sainfoin), wild rose, thyme, astragalus, chestnut, blackberry, alfalfa, vetch, eryngium, and other plants, or from a mixture of these. The hives are moved during the production season from lower to higher elevations, so many different honeys are made depending on what flowers are available. Honey is also collected from wild bees (the same gray Caucasian bees, but ones that became wild and live in the forests); one can collect wild honey from wild hives or domesticate a wild swarm with the use of special homemade log hives.

**Production period:** May-August

**Nutrition:** Natural honey is known to be a very high-energy food, as it is absorbed 100% by the human body. It can be applied externally as a disinfectant or germ killer and is effective against staphylococcus.

**Production quantity, distribution, and market:** Each beekeeper produces 1-3 tonnes of honey, which is sold along with other bee products in local and city markets, through wholesale customers, as well as at honey fairs held annually in the capital. Almost every beekeeper has his own circle of permanent customers who order in advance.

**Preparation and consumption:** The honey is kept in glass jars of 0.5 or 3 liters. Restaurants and pastry producers use this honey to prepare traditional pastries (baklava, shaker bura, balla-badi, khalva, etc.). Locals also make a variety of forest fruit preserves with this honey and consume it in tea and with breakfast all over the country, in rural and urban regions.
Fruit, nuts, and fruit preserves

ROSEHIP SYRUP

**Scientific name:** made from Rosa canina

**Local name:** itburnu nektari

**History and production area:** Of the more than 300 species of roses in the world, 42 can be found in Azerbaijan, 36 of which grow wild. Zarat village, in Ismailli District, is famous for its rosehip syrup, which has been produced here for as long as anyone can remember.

**Description and production:** To produce rosehip syrup, freshly harvested rosehips are washed in lukewarm water and then boiled in a covered pan for about 25 minutes. Then the heat is turned off and the pan, still covered, is left to sit for 3-4 hours so that the rosehips can infuse thoroughly. Next, sugar is added (0.5 kg for every 1 kg of rosehips) and the mass is stirred at a boil for 15-20 minutes, until it thickens. Finally, the syrup is passed through a very fine sieve. At the end some honey is added for preservation. Traditionally, sweet beetroot starch was used instead of sugar. Sixteen kg of rosehips yield about 5 kg of syrup. A surprisingly fragrant syrup is also prepared from rose petals. The flowers should be processed immediately after harvest, before they go bad. The hot syrups are packaged in tightly sealed glass bottles or jars.

**Production period:** Rosehips are collected from the wild in September-October.

**Nutrition:** In Ismailli, rosehips are used in traditional medicine as a treatment for hypovitaminosis C and P (treatment and prevention), asthenia, and immunodeficiency. They have immunostimulatory and choleric effects due to the presence of organic acids and flavonoids.

**Quantity produced:** Usually one family can produce 150-200 liters/year.

**Product distribution and market:** Only women are engaged in the production of rosehip syrup, and the most famous producers do not need to market their product as people approach them directly and they have permanent customers. It is also easy to find the syrup in local markets and in specialized shops.
GABALA DISTRICT

Gabala is situated in northern central Azerbaijan, on the southern slope of the Caucasus. The district has an area of around 1,500 km² and a population of 95 thousand people, the majority of whom live in rural areas. Almost 80% of Gabala’s residents are Azerbaijani, with Udis, Turks, Lezgins, and other minorities also present. Gabala District can be roughly divided into three areas: mountains (the highest peaks in Azerbaijan are located on the northern border of Gabala), plains, and high plateau. The topography is complex and the climate ranges from dry subtropical to tundra.

Gabala contains an extensive network of rivers and mountain lakes. Forests rich with walnut and chestnut trees are located in the lower mountain areas. Agriculture forms the basis of the economy, and the most important crops include tobacco, tea, flowers, rice, fruits, grains, and grapes. Sheep farming and silk production are also important. The Turyanchay National Reserve and Gabala State Historical and Art Reserve are important areas for tourism.

Fruit, nuts and fruit preserves

BARBERRY

Scientific name: Berberis vulgaris
Local name: zirinj

History and production area: The common barberry is widely distributed throughout the northern hemisphere; it is native to parts of Eurasia and North Africa, and naturalized in North America and Northern Europe. Barberry grows abundantly in forest glades on the slopes of the Greater Caucasus Mountains. In Azerbaijan, barberry, cherry plum, and pomegranate were used as an alternative to sea salt. In the last few decades, this tradition has, unfortunately, been abandoned as the consumption of relatively cheap (and unhealthy) salt is growing. Preserving the traditional use of sour products as substitutes for sea salt promotes the healthy, traditional food culture of the local population as well as the unique flavors of Azerbaijani cuisine.

Description: Barberry is a deciduous shrub with thin, erect, ribbed shoots that branch at an acute angle. The leaves grow in bunches from short shoots and are ovate, lanceolate, elliptical, or obovate, with a finely toothed margin. The fruit is an elliptical, ovate, or almost spherical red berry 8-12 mm long, with one to five seeds.
Harvest period: Barberry can be propagated by seed, by dividing the bush, and with summer cuttings. Harvest takes place from September to November. Wild barberries are collected by local people in neighboring forests in accordance with their needs. The collection of barberries in State forests is allowed, but in some protected territories collection is limited by law.

Nutrition: In the winter, people use barberry as a therapy against colds. It is also used to stabilize blood pressure. In general, Azerbaijani traditional cooking often uses acidic foods like barberry in place of salt.
Quantity produced: About 25-30% of farms in Gabala, Ismailli, and Shaki districts grow and harvest barberry, or collect it from the wild.

Distribution and market: Barberry is sold in local and urban markets as well as to wholesale buyers in freshly picked, dried, and canned form.

Preparation and consumption: Barberries, both fresh and dried, are widely used in the Azerbaijani kitchen as an additive to meat and in the preparation of qutab (a flat bread) and other flour-based dishes. Barberry is used in Ismailli, Gabala, Shaki, and other mountain regions as a natural preservative for pickled onions. This marinated dish consists of sliced white onions with layers of freshly harvested barberries. Barberry is appreciated by the local population and is served as a cold appetizer for meat dishes. A number of traditional restaurants in the capital and other regions acquire barberries from local markets and use them both in cooking and for the table setting.

GRAPE LEAVES FOR DOLMA

Scientific name: made from Vitis vinifera

Local name: uzum yarpagi

History and production area: Dolma is a traditional dish in the countries of the former Ottoman Empire and anywhere with Turkic influence. Dolma is widespread in the gastronomy of Transcaucasia, the Balkan Peninsula, and Central Asia, and each region has its own variations. The exact origin of dolma is unknown, although the Turks and Greeks both claim to have invented it. Mention of dolma is absent from early Persian and Arabic sources, but it was already known during the Ottoman Empire, as part of the Sultan's cuisine. Perhaps dolma appeared at this time, but it is also possible that it was borrowed from Greek cuisine. Stuffed vegetables, as a luxury item, were most likely designed for the elite kitchen. The sophisticated cooking technology requires a special preparation, while the harmonious combination of vegetables and filling is appreciated by customers with fine palates. The dolma is an example of how the Turks enriched Islamic civilization with their culinary influence. In Azerbaijan, dolma is considered an integral part of the cuisine. In December 2017, at the 12th session of the Intergovernmental Committee for the Protection of the Intangible Cultural Heritage of UNESCO, the tradition of making dolma in Azerbaijan was recognized as one of the elements of the intangible cultural heritage of mankind

Description: Dolmas are made by stuffing vegetables or leaves, usually grape leaves. The leaves are commonly harvested for future use so that dolma can be eaten year round. The filling is usually prepared with rice and may also contain boiled minced meat.

Production period: Harvest takes place from late May to early June, depending on the region and local climate. If the vineyard has been recently treated with insecticides, it is not possible to harvest leaves for dolma.

Distribution and market: Sold in farmers markets.

Preparation and consumption: There are more than 10 types of dishes in Azerbaijani cuisine whose names include the word “dolma.” For all types of grape leaf dolma, katyk or another fermented milk product, with or without the addition of garlic, must be served to the table. In the summer of 2016, Baku hosted the First International Dolma Festival and, a year later, the Second Dolma Festival was held in Khachmaz and more than 300 types of dolma
from 40 regions of Azerbaijan were presented. Preserving grape leaves for dolma is accomplished through salting, pickling, freezing, or drying. Only the softest and gentlest leaves of white grape varieties are harvested. Young leaves that have recently opened are harvested because their veins are not coarse. If the leaves are fresh, the locals just rinse them with cold running water. Blanching the leaves in boiling water for 2-3 minutes makes them easier to fold when it is time to prepare dolmas, but compromises their fragrance. After being cleaned, the preserved grape leaves are filled with prepared minced meat. They should not be rolled too tightly. To prepare dolmas, the grape leaves are spread out on the bottom of a large, thick-bottomed saucepan with a little oil. One by one, the leaves are stuffed and folded. After the dolmas have been placed in the pot, they are covered with water and the pot is put over the fire, with a lid. A plate should be placed on top of the dolmas to keep them from floating up and opening. They are cooked for 1-1.5 hours, until the leaves are tender.

PRESERVED HORNBEAM LEAVES

Scientific name: made from Carpinus betulus

Local name: pip yarpagi

History and production area: Since ancient times, various types of dolma (stuffed vegetables or leaves) have been a characteristic feature of Azerbaijan's gastronomy; there is information about dolmas in sources dating back to the 7th and 8th centuries, and each region has its own variations. In Ismailli, the most valuable dolma recipe—handed down from generation to generation—is prepared with the leaves of the hornbeam tree. Dolma has been a characteristic dish of Turkic peoples since the introduction of a sedentary lifestyle, since the preparation of dolma requires a lot of effort and time.

Description: The hornbeam has a longitudinally ribbed trunk covered with smooth or slightly cracked gray bark. The crown is thick but not wide and the branches are relatively thin. The buds are pointy and scaled, and the leaves are simple, 3-10 cm long, elliptical or oval, and doubly serrated. Hornbeam grows in the subalpine deciduous forests of the Greater Caucasus. It forms extensive forests and grows slowly. Because it is very shade tolerant, hornbeam can thrive under the canopy and live for hundreds of years. Hornbeam forests occupy 25% of the total forest area in the Caucasus (about 1 million hectares). They are most prevalent at elevations between 600 and 1000 m above sea level. The soft leaves that appear in spring are salted and canned; these preserved leaves are used to prepare many different fragrant kinds of dolma.

Production period: The leaves should be collected only in May, before they become thick (dolmas made from leaves that are too mature have an inferior texture and flavor).

Distribution and market: Preserved foods, including hornbeam leaves, are widely sold in local and city markets, in retail chains, and also in traditional restaurants that serve dolma.

Preparation and consumption: Hornbeam leaves, tender and thin, are harvested only in the middle of May and at this time are preserved or used immediately for cooking dolma. The leaves are heated and preserved dry in jars, or treated with hot brine and then jarred. The word “dolma” originated among the Turkic peoples of Central Asia
and refers to a genre of stuffed dishes. For dishes made by wrapping meat in leaves, there is also another traditional name, sarma, which comes from the Turkic verb sarmak, meaning “to wrap.”

**WALNUT JAM**

**Scientific name:** made from *Juglans regia*

**Local name:** goz murabbasi

**History and production area:** In the households of the Greater Caucasus, at least one walnut tree can be found in almost every yard. Women use the nuts to prepare many dishes, ranging from hingal to baklava, and also make jam out of them. In Azerbaijan, Gabala District is known as the “capital of preserved food”; the locals use salt or sugar to preserve almost everything, including apples, dogwood, grapes, garlic, eggplants, cabbage, quince, and pepper—there is practically no fruit in Gabala that a women cannot make into an amazing jam.

**Description:** Several varieties of walnut are used, including seyfi and sugra, both of which are delicious. The seyfi originated in Aylis village in the Ordubad District of southwestern Azerbaijan; trees of this variety are tall with a sprawling crown, and their fruits ripen in mid-September. Each walnut weighs 6-8 g on average. The shell is not too thick and the kernel, which is yellowish and oily, is easy to extract. The kernel yield is 60-70%. The sugra variety is from Andamij village, also in Ordubad District, and it, too, has a sprawling crown. Harvest takes place in late September. The nuts are pale and egg shaped, with a point. The kernel, which is light yellow and greasy, separates easily from the shell and the kernel yield is 60-70%.

**Harvest/production period:** Harvest takes place in late September and the jam is made in September-October.

**Nutrition:** Walnut jam is not only tasty, but also very healthy. Despite the long soaking of walnuts, many useful substances are still preserved in this jam; it is an excellent source of vitamins (especially E, B1, and B2) and ascorbic acid. Green walnuts, and therefore the jam, also contained a lot of vitamin P, which has a positive effect on the strength of capillaries and blood vessels. Thanks to their tannins, walnuts are good for indigestion. Walnut jam is recommended for chronic fatigue and reduced immunity defenses.

**Product distribution and market:** Walnut jam is sold in markets.

**Preparation, consumption, and preservation:** The locals peel the green nuts (they wear gloves for this) and soak them into cold water for 2 days, rinsing the nuts and changing the water 4-5 times a day. Then, for 1 day, they soak the nuts in limewater, made by mixing 0.7 kg of slaked lime into 5 liters of water. On the 4th day, they wash the nuts in cold water and pierce each nut with a fork in three places. Then the nuts are soaked again for 2 days, with the water changed 4-5 times a day. On the 6th day, the nuts are boiled in water for 10 minutes and then thrown in a sieve. Next, they are boiled in a simply syrup with clove and lemon juice, cooled, and boiled again; this process is repeated several times. The result of this long process is sweet walnuts that are soft yet crunchy. Walnut jam can be stored for years.
**DOSHAB**

**Other common names:** bakmazi

**History and production area:** Doshab is a concentrated juice made from various fruits. It is both an appetite stimulator and a healing remedy or cough syrup. Being a concentrated product, it is used in wintertime as a natural dietary supplement. This nutritional beverage has been known and used since very ancient times and the recipe is carefully passed on from generation to generation. For many centuries, mothers have been treating their children with this cough syrup.

**Description:** Doshab is made simply by boiling fruit juice over low heat for a long time. The most common doshab in Azerbaijan is made with grapes, mulberry, and peach. Sometimes, people also produce doshab with honey and carob. High-quality doshab has a rather thick, fairly dense structure, similar to natural honey. It is dark in color, oily and—despite the absence of added sugar—very sweet and full of flavor nuances.

**Production period:** Depends on the harvest time of the fruit being used.

**Nutrition:** Doshab is very healthy because the fruits used to make it contain malic and citric acids, tannins, carotene, and a large number of micronutrients and vitamins, in addition to various sugars.

**Distribution and market:** In the past, this popular cough syrup, prepared according to the traditional recipe, was practically unavailable in the shops and markets. Today, however, it is very easy to buy doshab.

**Preparation and consumption:** In addition to being used as a cough syrup, doshab is used for cooking purposes. It is good with bread, mixed with butter, or added to tea. Egg dishes, salads, and meat dishes are seasoned with doshab. It is also used in the preparation of all kinds of desserts, such as khalva, churchkhela, sharots, sujuk, and mulberry doshab with ice.

**Beverages**

**MULBERRY BRANDY**

**Scientific name:** made from genus Morus

**Local name:** tut araqi

**History and production area:** Mulberry brandy is a traditional drink across a significant part of the Transcaucasian region, particularly Azerbaijan. Historically, the Karabakh region had the most active production of mulberry-based distillates, and a significant amount of industrial and domestic varieties of mulberry brandy is produced here. The history of mulberry brandy goes back many centuries. Some reduction in the volume of production occurred in the 19th century, after Russian vodka became widespread in the Transcaucasian territories that had become part of the Russian Empire. Nevertheless, in Azerbaijan, mulberry brandy is still widely distributed. It is noteworthy that local residents often attribute healing properties to this spirit.
Description and production: Mulberry brandy is obtained from the distillation of fermented mulberries. Ripe mulberries are gathered and fermented. The resulting brew is distilled twice to obtain high-quality alcohol. The most valuable brandy is made from white mulberries, which are widely cultivated in the mountains of the Greater Caucasus. The juice is squeezed out of the berries and fermented for several days in open containers without the addition of yeast or sugar. Traditionally, large earthenware jugs are used for fermentation, while industrial fermentation uses enameled metal containers. The resulting mash is to distilled in copper stills, once to get a drink of relatively low strength or twice to ensure a greater concentration of alcohol. Mulberry brandy is a clear liquid with a bitter aftertaste and light aroma of mulberry. In home-based production, it usually has a noticeable yellowish-greenish tint, while the industrial version is completely colorless. Depending on the number of distillations, the brandy may contain 40-80% alcohol by volume. The drink can be bottled directly after distillation, or aged (the latter usually occurs with stronger varieties). Traditionally, barrels made from mulberry wood are used for aging mulberry brandy; the inside of the barrels are fired. The duration of aging is usually from 1 to 5 years. Upon completion, the brandy is usually diluted with water before bottling. The aged varieties of mulberry brandy have a very rich color, from golden to dark brown, as well as a much richer and more complex taste, with woody and herbal notes and a strongly tart flavor.

Production period: The collection of mulberries for the manufacture of brandy usually takes place in July, when the berries reach peak sugar content (about 15%).

Distribution and market: The product is usually sold from homes/farms, in local markets without tax, and to wholesale buyers.

DOGWOOD BRANDY

Scientific name: made from Cornus mas
Local name: zogal aragi

History and production area: Dogwood has many uses in traditional Azerbaijani gastronomy and medicine. The fruits, which are commonly used to make jams and other products, are gathered from wild and cultivated trees. They contain antioxidants and melatonin and are an effective immune booster. The fruits are also effective against cancer, paralysis, and cardiovascular diseases. The fresh juice of dogwood fruit (cornelian cherry) is used as a refreshing drink and a remedy against diabetes. It is also used to treat malaria; for this purpose, the dried fruits are brewed and consumed as a tea, with the patient drinking one glass 2-3 times a day. Dogwood juice mixed with honey and egg yolk is a treatment for abdominal disorders. Powdered dogwood kernel is used to treat dysentery or, when mixed with barley flour and made into a paste, to treat skin diseases. A coffee can also be made from the kernels. Dogwood wine is an important medicine for diarrhea and dysentery. The dogwood leaf has always been used as tea substitute, and this tea is used to treat kidney disease, liver disease, and diabetes. High-quality fruit lavash is also made with dogwood, and is widely used in delicious appetizers as well as to improve digestion (dogwood fruit is good for the digestive tract). Local people use dogwood fruit both fresh and dried for many different
dishes. They add honey and egg yolk in the juice to prepare the mix for the treatment of the abdomen.

**Description and production:** Dogwood brandy is a fragrant alcoholic drink that expressed the nuanced flavors of one of the signature fruits of the Greater Caucasus region. Dogwood fruits, which are high in vitamin C, are small and have a sour, astringent flavor, even when ripe. Their bright red color is due to the presence of anthocyanins. Dogwood brandy is obtained from the distillation of fermented dogwood fruits. As they ripen, the fruits become less acidic and richer in sugar, and the overripe fruits are preferred for the production of brandy. They are fermented without added and the resulting brew is distilled twice to obtain high-quality alcohol.

**Quantity produced:** Usually up to 30 liters of this beverage are produced each year on 20-25% of Gabala's farms. A small surplus is sold to wholesale buyers and restaurants.

**Distribution and market:** Dogwood brandy is mostly produced for household consumption and sold mainly in restaurants in Azerbaijan. All alcoholic products are subject to tax but, often, the local people sell these products directly through local markets without being taxed.

**Preparation and consumption:** This product is perfect for making cocktails and pairs well with traditional snacks, roasted and baked meat with vegetables, kebabs, and khash. Despite being called brandy or vodka, many of the traditional fruit spirits of Azerbaijan are used primarily for medicine.

**SUMAC JUICE**

**Scientific name:** made from genus Rhus

**Local name:** sumax suyu

**History and production area:** Sumac is widely used as a seasoning in the countries of the Eastern Mediterranean and the Caucasus. In many cases, sumac replaces lemon and even vinegar.

**Description and production:** Sumac fruits have a bright ruby color and a sour and astringent taste. Ripe sumac has almost no smell. Sumac juice is made with fresh fruits and an amazing tea is prepared with dried sumac. People use both as refreshing drinks and for medicinal purposes.

**Period of production of the processed product:** August-September

**Nutrition:** Sumac fruit contains resins; many vitamins and minerals; tannins; and malic, succinic, tartaric, and citric acid. These give it, and the products made from it, anti-inflammatory, antioxidant, antifungal, antiseptic, and diuretic properties. Sumac juice is used as a remedy for bronchitis, cystitis, arthritis, and indigestion.

**Distribution and market:** Sumac juice is made in limited quantities, usually only for personal and household use.
Cakes, pastries, and sweets

FRUIT LAVASH

Local name: turshu lavash, lavashana

History and production area: Lavash usually refers to a thin bread, but can also refer to any thinly rolled food. Fruit lavash is a traditional “fruit leather” that is made in sweet and sour (pickled) versions. Various kinds of fruit lavash are prepared in different regions and are often sold along the roadside.

Description and production: Fruit lavash can be prepared from different fruits and berries. The most delicious is made from apple, pear, quince, cherry, and plum. The fruit is cooked slowly in a pan with some water. For 1 kg of fruit pulp, 200-500 grams of sugar (depending on the fruit acidity) is added. The resulting sauce is cooked, being stirring frequently. Walnut fragrance or pepper can be added. The sauce is then poured into a wooden tray with parchment paper. Once it sets, it is cut with a knife and dried in the open air. It is also possible to prepare a layered version.

Production period: July-September

Nutrition: This product is rich in fiber, vitamins, and minerals, and delivers them in a way that the body can absorb easily. Fruit lavash improves digestion and cleans the inner surface of the intestine. Because of its sugar content, fruit lavash is highly caloric.

Distribution and market: It is easy to find this product in many local markets.

Preservation: Fruit lavash can be stored for years.

Grapes

UDI COMMUNITY GRAPE VARIETIES

Scientific name: Vitis vinifera

History and production area: The village of Nij (population 5,744) is one of only two settlements with a concentrated population of Udi people. From time immemorial, the Udis have been engaged in winemaking, and virtually every family traditionally grew grapes of various varieties to make wine.

Description and production: The vines are traditionally planted under trees (oak, chestnut, walnut, etc.) and they climb into the canopy, reaching a height of 30 meters. When it is time for harvest, the people climb into the trees and gather grape bunches along the branches. This process inevitably breaks off some of the shoots, and this acts as a natural pruning. The three local grape varieties are shalav (a sour variety with reddish-black skin and a sugar content of 15%), figombal (deep black color, used for adding color to wine, sugar content of 15-17%), and neshum tul (rather sweet, yellowish color, sugar content of 17-20%). The grapes of all three varieties are hazelnut sized and round. The clusters are medium sized. The wine ferments in large oak barrels and is then stored in buried ceramic jars or, as has become more common in recent years, glass vessels kept in a dark, cool cellar. The wine made from
these grapes was traditionally consumed on holidays and for special events, and surplus was sold at the local market.

**Harvest period:** September-October

**Quantity produced:** The yield of one tree, depending on care, seasonal variations, and grape varieties, ranges from 100 to 400 kg. Today there are between 50 and 100 plants left in Nij, some of which are about 100 years old.

**Distribution and market:** Wines from these local varieties are very popular among those who know them, but they are on the verge of extinction because of the complex traditional cultivation method and harvesting technique.
Shaki District was historically part of the Shaki Khanate. Its main city, also called Shaki, is one of the oldest in the country. Shaki lies on the southern slope of the Greater Caucasus and has an area of 2,430 km² and a population of 184 thousand people. Most inhabitants of the city of Shaki and the largest villages in the district are Azerbaijani, but Rutuls (mainly migrants from mountainous villages in Dagestan), Lezgins (resettled in the late 18th century), and other minorities are also present.

The climate in Shaki is influenced by various air masses and mountain winds. It is characterized by humid and harsh winters, no dry season, and warm summers. Shaki has plenty of water resources, productive soils, and rich forest cover. The main rivers are the Kish and Gurcana. The forests contain a lot of oak and walnut trees.

Shaki is an important agricultural district, especially for livestock, grain, tobacco, and grapes. The district has become an important tourist destination as a result of its natural beauty, unique historical and architectural monuments, and local crafts.

Cereals and flour

**GARAGYLCHYG WHEAT**

**Local name:** garagilcik/qaraqilcik bugda sortu

**History:** Archaeological and paleontological studies show that wheat has been cultivated in Azerbaijan for at least 6-8 thousand years. Archaeologists have found mills, known as kir-kira and yel degirmany, from the 3rd-2nd centuries B.C. In his poems, the great 7th-century Azerbaijani poet Nizami Ganjavi mentions methods of cultivation and processing of wheat, as well as the products made from wheat. Durum wheat varieties, such as sary bugda, gara bugda, ag bugda, and gymmyz buďda, and soft wheat varieties including khirda bugda, gyrlka, and gyurgyan were mentioned in Azerbaijani literature from the 19th century. Shaki, Ismaili, Shamakhi, Jalilabad, Sabirabad, Agjabedi, Balakan, and Beylagan are considered the key grain-growing districts.

**Description:** Garagylchyg is the local traditional durum wheat variety of Shaki district. The plants are tall, reaching a height of 155 cm; under irrigation, they can grow up to 2 meters. This variety has average resistance to lodging. The grains are light yellow in color and have an elongated oval shape. There are usually 45 grains per spike. This is a drought-resistant wheat variety, adapted to the non-irrigated cultivation. It is grown mainly in foothill areas. In recent years the diversity of cultivated wheat crops has reduced, mainly due to the dramatic reduction in the cultivation of traditional and local varieties; most varieties grown now are those that have passed state registration. This has led to wide use of the Garagylchyg-2 variety, which resulted from expanded genetic improvement activity performed in the 1980s by crossing the local garagylchyg with a Mexican short-stem wheat variety.
Harvest period: Begins in mid-June.
Consumption: Flour made from garagylchyg wheat is used in major traditional dishes and may be found in local markets. Some milling still takes place in traditional watermills. Use of garagylchyg wheat flour is declining because it cannot compete with imported flours, which the local population is now adopting.

BALTALI RICE
Scientific name: Oryza sativa
History and production area: In Azerbaijan, rice was originally grown on the fields of the Shaki-Zaqatala, Aran, and Lankaran-Astara economic regions (a belt running through the center of the country from north to south). The subtropical climate of this area makes it suitable for rice cultivation. Initially, the inhabitants of these regions valued rice more than wheat, so it entered the traditional local cuisine. In the 18th and 19th centuries, rich merchants from Lankaran-Astara (the southernmost part of Azerbaijan) exported rice, flax, silk, vegetables, and fish products to the markets of Russia, and trade relations contributed to the development of industry and education in the city of Lankaran. Rice cultivation began to decline in the 1940s and 50s due to changes imposed by the Soviet Union, including the systematic drainage of irrigation systems, which impacted rice and pond fisheries. After the record-breaking harvest of 102 thousand tonnes in 1928, rice yields gradually began to decline to of 5-10 thousand tonnes per year in the following decades. In 2011, Azerbaijan began to revive its rice cultivation and the yield was 16 thousand tonnes in 2017.
Description and uses: The rice grown in Baltali, a village in Shaki District, has large grains with a soft texture and milky color. Some of the rice grown in Baltali is ground in a watermill and used to make Shaki khalva and many other local sweets. It is also sold on local markets and used in local cuisine, although the majority of households prefer to buy imported rice for cooking plov and other traditional dishes.

Fruit, nuts, and fruit preserves

KIZIL AKHMAD APPLE
Scientific name: Malus pumila
Other common names: gizil/qizil Ahmad apple
Local name: kizil Akhmad almasi
History and production area: In the 17th century, Mohammed Hussein Khan Shirazi described apples as “mature, fragrant, with a strong sweet taste. This fruit is useful for tachycardia and breathing difficulties. Apples improve appetite, clean the intestine, and are useful for the work of the liver. In addition, apples help improve vitality, vigor, good mood. People with chronic nervous diseases are advised not only to eat apples, but also to inhale their flavor. Apples are good for your brain. Cooked apples are useful for dry cough.” Azerbaijan grows up to 300 varieties of
apples, 60 of which are commercially important. A special advantage of apples is their long shelf life. In Azerbaijan, apples ripen almost the entire year, except in spring. Historically, gardening has been very important in Azerbaijan, and when gardens were being made, wild apple varieties were not removed, but replanted. Mainly grown in Ismailli, Gabala, and Shaki, the kizil Akhmad ("golden Akhmad") apple is distinguished from others by its flavor and color. There are two theories about where the kizil Akhmad originated: One traces it to Kalamchi village, in Ismailli District, where these apples have a particular taste and lighter color; the second says that it comes from the village of Kish, in Shaki District, where there are many old trees of this variety in every family orchard.

**Description:** The kizil Akhmad Apple is dark red, the taste is sweet, and the flesh begins to change color immediately after having been cut. This variety is small and round, with thick, glossy skin and a distinctive aroma.

**Harvest period:** October

**Uses:** Kizil Akhmad apples are rich in vitamin A and iron. They have the potential to regulate the function of the cardiovascular system, increase appetite, and eliminate blood glucose.

**Quantity produced:** Almost every household in the region has several kizil Akhmad apple trees, which makes up to 20% of the apple crop. In recent years, due to the climate change, yields have been reduced. Farmers have begun to cultivate more productive foreign apple varieties.

**Consumption and preservation:** These apples are eaten fresh and also roasted, dried, and used for jam. Since gardening was also of great importance for commercial and export purposes, great attention was paid to the storage of fruits. Apples were transported by freight train to various cities, such as Odessa and Rostov. Drying was often used as a preservation method, and apples were stored in boxes in special structured called tandir. In Ismailli, where there were particularly abundant crops, apples were sometimes kept right in the garden, covered with ferns.

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**WINTER APPLE**

**Scientific name:** Malus pumila  
**Local name:** yer almasi

**Description:** The trees are small and bushy, very low to the ground, and branchy. The pinkish-white flowers appear in early April. The fruits are small, pale in color, slightly tough, and very sweet.

**Harvest period:** early June.

**History:** The trees used to grow in many private and public orchards, but have now almost disappeared.

**Consumption:** These are the first apples to appear in the season, and are eaten fresh.

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**SPRING APPLE**

**Scientific name:** Malus pumila
Local name: yjai almasi

Description: The trees are tall and branchy. The pinkish-white flowers appear in early April. The fruits are white and red.

Harvest period: middle of June (these early-ripening apples are among the first to appear).

PEARS

Scientific name: Pyrus communis

Local name: armud

History and production area: People have been eating pears (first wild and then domesticated) for thousands of years. In the Odyssey, Homer mentions the gardens of the Persian king Alkinoi where fruits grew in abundance, and all of the descriptions include pears. Over the history of their cultivation, pear breeders have developed thousands of varieties. Some of them are well adapted to the mountainous regions of the Greater Caucasus. Local varieties from this region are usually more productive, hardy, and disease-resistant than imported commercial varieties, and also have greater longevity. Pears from the mountainous regions of Azerbaijan are valued not only for their vitamin and mineral composition, but also because they contain essential oils that are thought to be able to improve a person's mood.

Description and production: The tastes and textures of pears vary greatly: They can be tart, sour, sweet, juicy, dry, hard, soft, etc. Among the traditional varieties from Shaki are the Abas Beyi and Ahmed Gazi pears. The Abas Beyi is named for the person who bred it, and it originated in the villages of Quba District. The trees of this variety are tall with a rounded crown. The fruits ripen in summer and have an average weight of 110-120 g. When mature, these pears have a dark yellow color; they are deliciously juicy and sweet and have a marked fragrance. This variety grows in Shamakhi and Ismailli, as well as Shaki. The Ahmed Gazi pear may have been selected four centuries ago, also in a village in Quba. The trees have a pyramid-shaped crown and the fruits ripen in late summer, reaching an average weight of 130-150 g. The flesh is white, juicy, and sweet. The skin is yellow with a red blush. In addition to Shaki, this variety is present in Shamakhi, Ismailli, and Gakh districts.

Harvest period: Pears of different varieties ripen at different times, so the harvest season lasts from July until October.

Nutrition: Pears are rich in nutrients; they contain many vitamins, as well as arbutin and pectin, folic acid, beta-carotene, and minerals such as potassium, calcium, magnesium, zinc, selenium, copper, manganese, iron, sulfur, iodine, fluorine, phosphorus, and sodium. Pears are useful for preventing cholesterol build up and atherosclerosis. They have a slight diuretic effect, improve blood health, and remove toxins from the body. Possessing antimicrobial and antibacterial properties, pears are a good treatment for disorders of the gastrointestinal tract, especially those related to microflora.

Quantity produced: Each farm in the regions produces up to 20 kg of pears. After the harvest, they produce jams, dried fruits, and compotes that are kept for the winter and sold in the markets.
**Distribution and market:** Local farmers preserve genetic material and multiply local pear varieties to produce their derivatives (juice, compote, jam, dried pears, etc.). These products are sold on local markets as well as through wholesale buyers in city markets.

**WHITE DOGWOOD**

**Scientific name of the product:** Cornus mas  
**Other common names:** Shaki dogwood  
**Local name:** ag zogal  

**History and production area:** This white-fruited variety of dogwood was introduced to the northern parts of Azerbaijan by the Central Botanical Garden several decades ago. One of the popular names for dogwood fruit (cornelian cherry) in the Islamic world is “Shaitan berry”—a Shaitan is a kind of evil spirit from Islamic mythology. According to legend, Allah distributed various plants to the creatures of the; a Shaitan came to Allah and asked for dogwood, having reasoned that, since this tree blooms early, it would yield an early harvest. In fact, dogwood fruits just green for a long time and ripen very late, which greatly angered the Shaitan. He spat into the bush so that the berries would turn black and he could give dogwood fruits to the people. Since then, people have been happy to collect and eat ripe dogwood fruits in the fall.

**Description:** This is an unusual dogwood with white fruit. Azerbaijanis from other regions call it “Shaki dogwood.” There is great variation in the appearance of dogwood fruits: some are short, others long and oval-shaped; some are spherical, others pear-shaped. They can be white, light red, dark red, purple, or almost black. The average fruit weight is 2–6 grams. The pulp accounts for 68-88% of the fruit weight. The fruits ripen in late August and September. The plant is relatively drought resistant and can withstand temperatures well below freezing, though late frosts can affect flowering. At the age of 12 years, a dogwood can produce 25-30 kg of fruit, and at the age of 25 years, up to 100 kg. Dogwood plants can live for up to 250 years. The juicy fruits of the dogwood have a pleasant aroma and a sweet-and SOUR, astringent taste. They are used fresh and processed in the culinary, confectionery, and canning industries, and can be made into jam, jelly, juices, syrups, compotes, soft drinks, liqueurs, and wines. In Azerbaijan, dogwood sauce and fruit lavash are very popular.

**Harvest period:** September

**Nutrition:** Dogwood fruit is rich in vitamins (A, E, C, P) and minerals (iron, potassium, calcium, magnesium, phosphorus, sulfur, etc.), essential oils, flavonoids, organic acids, and catechins. The benefits of white dogwood are several: it strengthens the immune system and blood vessels, slows the development of atherosclerosis, improves heart function and digestion, removes toxins from the body, helps with weight control, reduces inflammation, helps with gout and rheumatism, increases the level of hemoglobin in the blood, strengthens the pancreas, cleans the urine, and improves liver function. It is a good treatment for constipation and for stomach and duodenal ulcers. Dogwood fruit sauce usually contains 10–15% acids and 30–40% invert sugar. Dogwood leaves also have healing properties: A decoction of the leaves helps with intestinal diseases, fever, colds, and increasing the appetite. Dogwood is also known as an antidiabetic agent.
ESHKANGAVI

**History and production area:** The history of eshkangavi stretches back to ancient times; it has always been a typical and traditional drink in Shaki.

**Description:** Eshkangavi is a kind of sherbet (a sweet, cold drink made using boiled water infused with sugar, various fruits, berries, mint and so on) made from linden flowers, honey, and spices.

**Period of production of the processed product:** Eshkangavi is produced in springtime when the lindens are in bloom.

**Distribution and market:** Eshkangavi is mainly served in sweet shops free of charge, to attract customers.

**Preparation and consumption:** This beverage is traditionally served during funeral ceremonies as a refreshing drink for guests.

ROSE PETAL JAM

**Scientific name:** made from genus Rosa

**Local name:** gul murabbasi

**History and production area:** Rose is one of the world’s most famous plants and has been used in everyday life since ancient times; rose oils and extracts and rose petals have been used for in baths, in the production of skin lotions and other cosmetics, in brewing tea, and in cooking. Nowadays, some farmers in Shaki make jam from roses. Rose jam was born in Turkey, where it is called gulbeshesheker, and then became popular in Azerbaijan.

**Description and production:** Rose petal jam must be made from small pink or red petals. In addition to tea rose, the petals of wild roses are used to prepare the jam. It is important to collect the petals at their peak, during the short flowering period; it is best to harvest them in the early morning to preserve their aromas. If a sufficient number of roses cannot be collected at one time, you can harvest them for 3-4 days as they bloom, putting them in a plastic bag and tying them tightly so that the fragrance does not evaporate. Raw materials should be stored in the refrigerator. When a sufficient number of roses are gathered, it is necessary to separate the petals from the reproductive organs at the center of the flower. The clean petals are cooked in simple syrup over a strong flame and then a bit of vinegar is added. The more saturated the color of the petals, the more attractive the final jam. Rose petal jam can be eaten on its own or used in desserts like baklava.

**Production period:** May-October

**Nutrition:** Rose petals are often added to tea, which is then consumed for its cleansing effect. This tea also improves sleep and skin condition, is very useful for people with gastrointestinal diseases. Rose petals can also be added to honey and wine. Rose petal jam is used to treat sore throat, gastritis, stomach ulcers, bronchitis, and difficulty sleeping.

**Distribution and market:** The product is preserved and supplied to local markets by wholesale buyers as well as in the trade network. It is also supplied to various cafes and teahouses.
FRUIT PICKLES

**History and production area:** Making pickles from local fruits is traditional in Shaki and also in Gabala. Since ancient times, spicy, pleasant-smelling pickles have decorated local tables, whet the appetite, and complemented many main courses. Housewives were forced to come up with various ways to preserve the harvest so that winter meals could be as varied as summer meals—and pickles are not only tasty, but also healthy: Natural brine contains many beneficial bacteria and valuable vitamins and biologically active substances are preserved in vegetables and fruits that are not subjected to high-temperature treatment. The natural fiber contained in fresh fruit is poorly absorbed by our body, but after fermentation it becomes soft and easily processed by enzymes of the digestive organs.

**Description and production:** Local fruits (cherry, cherry plum, dogwood, plum, early apples, cornelian cherry in summer, quince and medlar (azgil) in autumn) are slightly boiled with garlic and then purple basil is added. The mass is allowed to cool and then stored until the winter or following spring in jars. Pickles are mostly homemade by local women, but can be bought in local markets, which are full of colorful glass jars. One of the main features of Azerbaijani cuisine is the combination of neutral-tasting fresh food products (e.g. boiled rice, chestnuts, young meat, eggs, or fish) with distinctively sour vegetable and dairy products. The result is, on the one hand, a contrast of sweet and sour, and on the other a softening of a sharply sour taste to a pleasant, moderately acidic one. This is confirmed by the fact that fruit pickles accompany many meat and fish main dishes.

Vegetables and vegetable preserves

**WHITE CUCUMBER**

**Scientific name:** Cucumis sativus

**Local name:** ag xiyar

**History and production area:** The white cucumber was described in Shaki in the 1960s and has been cultivated here ever since. The details of its origins and genetics are unclear. White cucumbers are used for canning and were previously used in the Shamakhi region for preparing dolma (khiyar dolmasi); this dolma was distinguished by its exquisite taste and unique, delicate texture.

**Description and production:** The young cucumbers are pale green, and they become white as they ripen. In addition to its pale color, this type of cucumber differs from other varieties in that its taste is more similar to zucchini. The flavor and aroma are more pronounced than in other cucumbers, and the taste is sweet, with no bitterness. This variety is the same shape and size as other cucumbers. It does not contain many seeds. The plants should be trellised to improve air circulation and exposure to sunlight, though white cucumbers do tolerate shade and cooling. They are productive at temperatures up to 45 °C.

**Harvest period:** Summertime

**Quantity produced:** It is difficult to calculate, but most canned cucumbers in Shaki and Gabala districts are made
from the white cucumber variety.

**Product distribution and market:** These cucumbers are easy to find in the local markets. In canned form, they may be found in traditional restaurants.

## Cakes, pastries, and sweets

There are more than 30 varieties of unique Azerbaijani pastries that use ingredients such as poppy seeds, walnuts, almonds, sesame seeds, ginger, and cardamom, which make the treats spicy and especially tasty. Shaki, in northeastern Azerbaijan, is famous for its piti (a lamb stew with chickpeas) and for its sweets, which include girmabadam and Shaki khalva. Nobody who visits Shaki can resist these local delights.

### TEL KHALVA

**Description and production:** A syrup is prepared from granulated sugar; citric acid is added and the liquid is boiled until a caramel mass is obtained. This is then poured on a buttered marble table, cooled, and whipped by hand. At the same time, butter is heated in a pan and flour is fried in the hot butter. Then the fried flour is mixed with the caramel mass and the resulting mixture is pulled manually into thin filaments and then allowed to cool.

**Distribution and market:** Tel khalva is made in households and on farms and mainly sold in the local market.

### GIRMABADAM

**Other common names:** qirmabadam

**Description and production:** Girmabadam is made from a mixture of honey, almonds or hazelnuts, water, egg whites, rice flour, citric acid, and a bit of coriander seed. A syrup is made from the sugar, water, and citric acid and simmered until it reduces to a caramel. This is then beaten and allowed to cool slightly. When the caramel has cooled to 50-60 °C, the egg whites are beaten in. The mixture is ready when it has turned snow white. Next, the crushed hazelnuts and coriander seeds are mixed in. When cool, the mixture should be brittle. Girmabadam is shaped into rectangles about 15 x 8 cm and 0.5 cm thick. Browned rice flour is sprinkled over the top.

**Distribution and market:** Girmabadam is made in households and on farms and mainly sold in the local market.

### BAMIE

**Other common names:** bamiye

**Description and production:** Pastry is prepared from flour with soda and boiling water; once cool, egg is added. This dough is passed through a meat grinder with special plate at the center of which is a hole, 10-12 mm wide, with small teeth at the edges. Corrugated lengths of pastry are squeezed out of the meat grinder and are then cut into even pieces 7-8 cm long. These are deep fried in vegetable oil, soaked in sugar syrup, and sprinkled with powdered sugar after drying.
Distribution and market: Bamie is made in households and on farms and mainly sold in the local market.

FATIR

Description and production: Fatir is made from a dough of flour, sugar, butter, milk or matsoni (sour milk), yeast, egg, and a mixture of spices (cardamom, ginger, cilantro seeds, cinnamon, nutmeg). When the dough has been kneaded, it is divided into portions of 700-800 g. These are made into small cakes, about 1.5-2 cm thick and 18 cm in diameter. These cakes are decorated with patterns and then smeared with egg and sprinkled with poppy seeds and a saffron infusion. They are baked at a temperature of 190-200 °C for 30-35 minutes.

Distribution and market: Fatir is made in households and on farms and mainly sold in the local market.

FASALI

Description and production: Fasali is prepared from wheat flour, water, yeast, salt, oil, and spices (cinnamon, coriander, cardamom and ginger). A dough is made with the flour, yeast, water, and salt, and left to rise for 1.5-2 hours. Then it is rolled out very thin. The upper surface of the dough is then greased with oil, into which crushed spices have been mixed. Next, the dough is folded in 5 or 6 layers and cut into rectangles. These are rolled up and flattened vertically into round cakes with a diameter of 10-12 cm and a thickness of 1.5-2 cm. The cakes are baked in a pan and served sprinkled with powdered sugar, or with honey on the side.

Distribution and market: Fasali is made in households and on farms and mainly sold in the local market.

SHAKI KHALVA

History and production area: Shaki khalva developed from a sweet that originated in ancient Mesopotamia. Some say that it was first prepared by the cooks of one of the Khans of the Shaki Khanate, who loved desserts, upon his request for a new sweet, and that it then became popular among the inhabitants of the region. Another story says that this particular khalva came from Tabriz and was brought to Shaki by a merchant named Mashadi Huseyn.

Description and production: The main ingredients in Shaki halva are rice flour, sugar, peeled hazelnuts, coriander seeds, honey, sugar, butter, cardamom, and saffron. The flour must be made from local rice, ground in a local watermill. The first step is to make a thin, cloth-like pancake called rishta. This is accomplished by drizzling a simple batter of rice flour and water from a special vessel that has a row of 11 narrow holes in the bottom: This implement is held above a hot, round griddle and moved back and forth such that the strands of batter form a fine lattice as they cook quickly on the hot surface. The next step is stuffing: The stuffing is made of crumbled hazelnuts, pounded cardamom and coriander seeds, and sugar. Several layers of rishta are placed on a round copper tray, then the stuffing is added in layers, alternating with rishta. Several more layers of rishta are placed on top (14 rishta in total for one batch of Shaki Halva). The top of the resulting disc-shaped cake is decorated with designs or writing made
of saffron dye, applied with a thin brush. The whole thing is then baked in a pan over low heat for 10-20 minutes, to allow the sugar in the stuffing to melt slightly. Finally, the Shaki khalva is soaked in a hot syrup called sherbet (like the drink), made of sugar or honey and water, and left to rest for 8-10 hours. It is cut into squares for serving.

**Distribution and market:** Currently, there are three families that have been operating khalvachaya (specialized pastry shops) and making Shaki khalva for over a century. One is owned and managed by the great grandson of the khalvach (khalva-maker) who started the family khalvachaya in the same location where it remains today. During Soviet times, they were forced to cease the activity, as it was a private business, but they continued making it secretly, trusting the consumers who continued to buy it. These days, both family members and neighbors are involved in the activity.

**Breedes and animal husbandry**

**AZERBAIJAN BUFFALO**

**Scientific name:** Bubalus bubalis

**Local name:** Azerbaijan jamishi

**History and production area:** About 70% of the buffalo raised in the Caucasus are bred in Azerbaijan, which is why the breed is called the “Azerbaijani buffalo.” There is a long history of cattle breeding in Azerbaijan; the climate of the country is quite favorable for the intensive breeding of livestock in general. Azerbaijan buffalo are not too demanding and their presence helps to create fertile soil, which makes it easy to cultivate the fields where the buffalo are kept.

**Description and production:** Like all water buffalo, Azerbaijan buffalo have big horns, strong bodies, and a black coat. Because of their dark color, bright sun can cause them to overheat, so on hot days the buffalo love to swim in wetlands, stagnant waters, ponds, or riverbeds. Unlike cattle, buffalo are not tolerant of cold weather: Cattle can withstand temperatures of -20 °C, while buffalo should not be exposed to anything under -1 °C because they have less body fat to protect them. The Azerbaijan buffalo is mainly used for dairy production. Their milk is very rich, with a fat content of over 8% (it is highest after the third month of milking). The buffalos can increase their milk production by 8-10% by drinking a lot of water. At the age of 8 or 9 years, they start producing less milk. The farming system used for raising buffalo is usually extensive. From late March to early autumn, they are on pastures (they are given some grain at the limits of the season when the grass is not sufficiently abundant). During the winter, they are kept in the stables and fed hay and local grains. The milking period starts in March-April, after the birth of the calves, and lasts about 10 months. Milking is performed once a day (in the evening) by the same person, as the animals are very sensitive to strangers. Buffalo milk is processed similarly to cow’s milk, but the result is different—for example, buffalo yogurt is denser.

**Quantity produced:** In the 300-day milking period, each buffalo yields 700-1,500 liters of milk (depending on feeding and farming system), which contains the same fat quantity as 1,500-3,000 liters of cow’s milk. In recent years, the interest in breeding these animals has diminished.
**Distribution and market:** There is only one buffalo farm in Shaki, with 110 animals. It started with 10 animals after the privatization of the local collective farm. The farm sells milk in shops and makes yogurt (gatig) and butter only for private consumption. Some families keep up to three buffalo for milk and homemade dairy products.
GAKH DISTRICT

Historically part of the Kingdom of Kakheti-Hereti, Gakh District borders the Republic of Georgia to the west and is a center of the Georgian minority in Azerbaijan (the Ingiloy)s. The district covers about 1,500 km² and has a population of 54 thousand people. Azerbaijanis make up 80% of population, with Tsakhurs, Ingiloy,s and Lezgins present as well.

The geography of this district is rather diverse: The southern and central areas are mostly flat, consisting of continental deserts. Alpine and subalpine meadows and deciduous forests (with oak, hornbeam, walnut, chestnut, etc.) cover a wide area of the mountainous part of Gakh.

Since ancient times, Gakh’s economy has been based on agricultural production, including animal breeding. Modern production is centered on grains, tobacco, silkworm breeding, and livestock (mostly sheep). Gakh is rich in thermal springs. The Ilisu State Reserve, established in 1987, protects important flora and fauna of the southern slope of the Caucasus.

Meat products

GAKHAJ (CURED MEAT)

History and production area: Dry curing has always been used by the local population as a long-term storage method for lamb meat and to give it a special taste. It is thought that the origin of dry-cured meat products in Azerbaijan is connected with the food culture of nomadic peoples.

Description and production: Gakhaj is made using the meat of both large and small animals (mostly sheep, but also cattle and goats). It is most often made from a lamb or sheep of the Karabakh breed (a local sheep raised on pasture) that is between 6 months and 1 year old. Ilisu and Saribash villages are known for the high quality of their sheep. Gakhaj can be prepared in strips (this is more common for beef, and locals say that the strips should be as thick as your finger) or as a whole carcass. In the latter case, the carcass is butterflied and the entrails and spine are removed, along with the leg and shoulder; the ribs and the shank bones remain in the meat. For a typical sheep or goat, about 1 kg of salt is massaged into the carcass, which is then left for at least 1 day in enamelware. Then it is hung and sticks are used to keep it open (removing the spine allows the carcass to be opened out flat like a book); it is dried in the sun for 1 month, during which time more salt can be added, if necessary. Once ready, the cured meat can be stored in a cool place, packed in wheat flour ad wrapped in paper, for any length of time. If it is not kept cool, the gakhaj will become bitter.
Production period: Traditionally September-December, when insect pests are not present.

Quantity produced: In general, a butcher produces 10-15 carcasses of gakhaj per year. Almost every local family produces gakhaj for their own consumption.

Distribution and market: Gakhaj is sold in the local market and butcher shops, and also sent to Baku’s specialized restaurants.

Consumption: During the winter months, locals prepare a traditional dish called surfullu using gakhaj. They prepare simple dough and make pasta that are similar to Italian cavatelli, but larger and thicker. The pasta is boiled and put into broad plates or bowls. The gakhaj is boiled separately and then serves over the pasta. Surfullu can be cooked in water or milk. Gakhaj is also eaten on its own.

DOLMA SAUSAGE

Description and production: Lamb (or cow) intestine is washed, and meat is seasoned with onion, salt, dill seeds, cumin (from the local mountains), and, if the meat is not fatty enough, additional fat. This mixture is minced and stuffed into the intestine. The stuffed sausages are washed and covered with tissue to dry for 1-2 days, before being hung out to dry in the sun for 15 days. Each sausage is around 1 meter long. These sausages are prepared at the same time that gakhaj is made.

Consumption: Dolma sausage is used together with gakhaj in preparing surfullu—the seasonings in the sausage help to flavor the liquid that the meat is cooked in. The sausage is also used in bean soup (lobio) and in chelov plov, for which the sausage is boiled with walnuts.

Vegetables and vegetable preserves

MARSAN TOMATO

Scientific name: Solanum lycopersicum

Local name: Marsan pomidoru

History and production area: Marsan village is famous for tomato production. During Soviet times, various tomatoes were grown in the collective farm (kolkhoz), so most people did not grow them in home gardens. One family safeguarded the seeds inherited from grandparents and then shared them with the few families who wanted to cultivate tomatoes. According to local people, the Marsan tomato has slowly became a sort of “local brand” thanks to the selection work of farmers in the village. This variety is well known for reaching large sizes and not needing fertilizer.

Description: The Marsan tomato is spherical, about 10-13 cm in diameter. It can become quite large. The red skin is thin and delicate, so the ripe tomatoes do not travel well. This variety is sweet and juicy. The plant is up to 2 meters high and needs to be trellised. The seeds are collected from the first tomatoes of the season, which tent to be larger. The soil is not fertilized, no pest management is required, and the plants should be watered sparingly so as
not to compromise their sweet flavor.

**Harvest period:** Summertime (seedlings are planted in the field in May, and harvest continues until the first frosts of autumn).

**Quantity produced:** It is very difficult to estimate the total production quantity, but each plot can produce 300-500 kg/year. Nowadays, four families have seeds and plant these tomatoes, mainly for their own consumption. Most others families plant imported varieties from Russia.

**Distribution and market:** Only grown for household consumption.

**Consumption:** Used fresh in salads and other dishes; the biggest fruits are used to make tomato sauce; smaller fruits are preserved in marinade with other local vegetables.

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**Fruit, nuts, and fruit preserves**

**WINTER APPLE**

**Scientific name:** Malus pumila  
**Local name:** kish almasi  
**Production area:** Mountainous regions with an elevation above 600 meters.  
**Description:** The heavily branched trees of this variety are up to 3 meters tall. They bloom in mid-April. The apples are 6-8 cm in diameter. Each tree yields 150-200 kg in a season.  
**Harvest period:** October, before the frosts, when the leaves fall.  
**Distribution and market:** Locals grow this variety in their gardens, mainly for household consumption.  
**Consumption and preservation:** The apples are stored in attics or basements, spread out on slightly dried lico-rice branches; stored in this way, they will last until the following spring and ripen gradually.
**VARIOUS REGIONS**

**Milk and milk products**

**GURUT**

**History and production area:** Gurut is a dairy product widely used in the South Caucasus, western regions of Azerbaijan, Iran, Afghanistan, and Central Asia. The word “gurut” derives from the Turkish adjective kyry or kuru, which means “dry.” This product is associated with nomadic pastoral cultures. Gurut is an important part of the diet and culinary tradition of the peoples of Nagorno-Karabakh and diaspora communities from this area that have settled in various districts.

**Description and production:** Yogurt made from any kind of milk can be dehydrated and rolled into a ball, and thus kept indefinitely. Once dissolved in water, it becomes something that is not quite yogurt, but a liquid (sauce) that tastes of cheese and adds dairy flavor to main dishes. In order to prepare gurut, yogurt or buttermilk is drained and filtered until it becomes thick. Then is salted, kneaded like dough, and dried.

**Production period:** Year around

**Distribution and market:** Gurut is sold in farmers’ markets and made for personal or household consumption.

**Consumption:** Gurut is in with xingal, noodles, gurut plov, kajakosh, and other dishes. It is also sometimes used as a cheese.

**SHOR**

**History and production area:** Shor is a simple cheese from the Greater Caucasus region. The production of shor was particularly associated with the ancient village of Maraz in the realm of the Shirvanshahs, which had its capital in Shamakhi. Since ancient times, weaving has been an important activity in this region and is one expression of the local sheep culture. Initially, shor was produced from sheep’s milk.

**Description and production:** Shor is a soft cheese made from fresh sheep’s or cow’s milk. The milk is boiled, cooled to 40-45 °C, and then curdled, often using clabber prepared the previous day. The mixture is put in nehre, traditional wooden churns, to separate the butter from the buttermilk. The buttermilk (ayran) can be used as a drink, or made into shor. For making shor, the ayran is boiled and the curds are skimmed off. These curds are salted and then aged for a couple of months to make shor. Sometimes cumin seeds are added to give the shor a special flavor and aroma. Matured shor has a specific flavor that is highly valued in the local cuisine and which cannot be achieved by large dairy producers. This special taste is a result of the conditions in which shor is matured and stored.

**Quantity produced:** Farmers in Shamakhi produce 20 tonnes of shor each year.

**Distribution and market:** Shor is mainly sold in local markets or directly to customers who pre-order it.
**Consumption:** Shor is eaten with bread (such as lavash) and used in the preparation of motal cheese, one of the most valuable white cheeses in Azerbaijan.

**MOTAL CHEESE**

**Local name:** motal pendiri

**Historical region:** mountainous areas of the Greater Caucasus

**History and production area:** Motal cheese is produced throughout the Caucasus and in the neighboring region of Iran (i.e. Iranian Azerbaijan). This product has a very long history and is associated with the movement of pastoralists and their animals between winter and summer pastures, and their need to preserve dairy products. Motal is produced in small quantities in the high mountain summer pastures of Azerbaijan.

**Description and production:** Motal cheese is named for the sheep- or goatskin sack in which it is aged and stored. The sack can be made with the hairy side of the skin facing in or out; if the hair is on the inside, it helps the cheese to coagulate (thus, less rennet is used) and ferment, and also absorbs excess fat. The downside to this method is that hairs end up in the cheese. When the sack is made with the hair facing out, more rennet must be added to the cheese. The rennet (gursag mayas) is made from a lamb's abomasum, which is cured for a month in salted water with some grain and a piece of iron, to regale the pH. To make the cheese, a spoonful of the rennet is added to every 10 liters of milk (sheep's and/or goat's milk). The curds are separated from the whey and allowed to dry, and then salted and packed into the skin sack. Some shor cheese is added, which helps the motal cheese to season properly. Mountain thyme (keklikotu) may also be added. It is crucial that the skin sack has no holes in it and that all of the air is squeezed out before it is tied shut. The sacks of cheese are then left in a cool place to mature for at least a month, and ideally 3-6 months. During aging, the sacks are turned every 4-5 days. It should be noted that ripening motal in a glass, ceramic, or plastic vessel is ineffective for bringing out the product's distinctive characteristics. Motal cheese is crumbly and very salty. In finished form, it is usually divided into chunks of about 0.5-1 kg. It is whitish or pale yellow and tastes similar to a mature blue cheese.

**Production period:** Late spring

**Consumption and preservation:** Once properly matured, motal can be stored for several years. It is eaten with bread and pairs well with onions, garlic and basil, and dry red wines. You can also wrap motal in a pita or lavash with chopped greens (cilantro, dill, onions, and basil) and fresh cucumber slices to make durmekt.

**JOKH**

**Production area:** Jokh is a sort of aged clabber from the Greater Caucasus region.

**Description and production:** Jokh is made from the milk of sheep that graze on flowering pastures (usually mostly clover) for 2 months. The milk is warmed and coagulated, and the resulting mass is covered to keep it warm until morning, when the whey is separated. The remaining mass (40 liters of milk yield about 30 liters of curd) is kneaded by hand, salted, and put into a ceramic pot that is covered with melted butter. The pot is then buried in the ground for 15 days. After 15 days, the mass is kneaded again and then buried for another 10-15 days.
**Distribution and market:** Jokh is mostly made for private consumption. Due to the complicated processing method, it has almost disappeared.

**Consumption and preservation:** Jokh can be stored in a cool place for up to 1 year, or until the following season. It is usually eaten with warm bread from November onward, when milking is finished.

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**Beverages**

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**SHERBET**

**Other common names:** sharbat

**History and production area:** Sherbet has been prepared since ancient times. In the 10th and 11th centuries, sherbet was a hot beverage. At that time, it was made at home and distributed in markets, fairs, and places where the population was concentrated. Many medicinal plants (basil, peach, rose, mint, ginger, etc.) are used to prepare sherbet, and honey was used as a sweetener in old times. Sherbet is one of Azerbaijan's most famous traditional beverages.

**Description and production:** In Azerbaijan, the most common drink is sherbet. Delicious and fragrant with plenty of ice, this traditional beverage quenches the thirst of any gourmet. Honey or molasses, lemon, saffron, mint and basil seeds, and various fruits are used to make sherbet. The word “sherbet” derives from the Turkish word şerbet, which means “drink.” Azerbaijani sherbets are light beverages and in the local cuisine they play the role of soft drinks and match perfectly with pilaf and meat dishes. They are probably the most popular non-alcoholic drink. Sherbet is prepared according to ancient traditions from the tales of the book One Thousand and One Nights. Local people prepare sherbet from various fruits, plants, and spices, such as rose, pomegranate, mulberry, dog rose, cornelian cherry, dates, cherry, quince, lemons, mint, basil, tarragon, sumac, coriander seeds, and sorrel, and typically adding water, lemon juice, honey (or sugar), rose juice, and saffron. To make basil sherbet, water, lemon, sugar, and basil (reikhan) are mixed. The basil can be purple to give the sherbet a pleasant pink color. The basil leaves are put in a clean 3-liter bottle, to which is added a small amount of boiling water. Then sugar is added and mixed. After the sugar has dissolved, the bottle is topped with water and the juice of a lemon and then covered and allowed to cool. Since the sherbet must always be transparent, filter it before serving. Unfortunately, sherbet has a short shelf life, even if refrigerated, so it is usually made right before serving. Each sort of sherbet has its own specific color (lemon is yellow, citrus is orange, rose is pinkish or reddish, mint is green, pomegranate is red, etc.). The color plays a significant role in creating a taste association and it also contributes to the table decoration, making it more colorful. Local people serve the beverage glassware to show off the color.

**Distribution and market:** It is mainly produced for household consumption.
Fruit, nuts and fruit preserves

ATA BABA HAZELNUT

Scientific name: Corylus avellana
Local name: ata-baba findiqi

History and production area: Hazel (Corylus) is a genus of deciduous trees and large shrubs native to the temperate Northern Hemisphere. The genus is usually placed in the birch family, Betulaceae, though some botanists split the hazels (with the hornbeams and some other closely-related genera) into a separate family, Corylaceae. In Azerbaijan, the districts of Zaqatala, Gabala, Shaki, and Gakh are specialized in hazelnut production. The hazelnut is not only an important ingredient in Azerbaijani gastronomy, it is also one of the most widespread and economically important crops in the country. Azerbaijani hazelnuts appeared on the world market in the 1930s, when a full-fledged nut-processing factory was built in Zaqatala; Azerbaijan was one of the world’s first commercial producers of hazelnuts, but since the country was part of the USSR, this fact is rarely reported. Initially, the factory in Zaqatala produced only hazelnut kernels, but during World War II, equipment was brought in for the production of hazelnut butter. Thus, the factory supplied both raw material for confectioneries in all of the Soviet republics, and butter for soldiers on the front. The maximum annual production in the entire history of the factory was about 5,000 tonnes of hazelnuts per year, which was more than enough during the times when the factory was operational. All sales happened under strict state control and black market activities such as smuggling were severely punished. Hazelnuts from Azerbaijan remain in demand today, and Azerbaijan is now the world’s fourth or fifth largest producer of these nuts. In 2016, the world’s largest hazelnut purchaser, Ferrero, began cooperating with Azerbaijan, buying mostly nuts of the ata baba variety. “Ata baba” means “from fathers and grandfathers.” This is one of the most common and popular hazelnut varieties in Azerbaijan.

Harvest period: The nuts ripen by the end of August and then fall to the ground. They are collected in late September.

Nutrition: Hazelnuts are used generally as a curative food. Hazelnut with honey is a valued product and is consumed as a treatment for anemia and exhaustion. For centuries, hazelnuts have been given to nursing mothers.

Quantity produced, distribution, and market: Hazelnut production is mainly a family business, and groves can be small or occupy several hectares. Three hectares yield about 6 tonnes. Ismailli produces about 250 tonnes/year, Shaki about 2,800 t/yr, Gakh 4,200 t/yr, and Gabala 7,000 t/yr. About a third of the population of these districts is engaged in hazelnut production. Recently, a consortium of producers and exporters of hazelnuts in Azerbaijan was established. Farmers do not process the nuts themselves, but mostly sell them directly to a nearby plant. The market price of the nuts, which is affected by the quality/quantity of the harvest and exchange rates with the US dollar, has fallen in recent years.

Preparation, consumption, and preservation: Hazelnuts are widely used in Azerbaijani cooking and are particularly important during the spring holiday of Novruz. Sweets like baklava and shaker bura would be impossible to create without hazelnuts. Because of their durable shell, hazelnuts store well and were once an essential source of food during the winter. The shells are usually sold back to farmers, who use them as fuel instead of firewood.
PURPLE BASIL

Scientific name: Ocimum basilicum

Local name: reikhan

History and production area: Purple basil is one of the oldest seasonings of the national cuisines of the Caucasus, where it is called reikhan, which means “royal flavor.” It has been grown in the area since at least the 18th century.

Description and production: Reikhan is annual herb 50-70 cm height with a straight stem and oblong-ovate leaves of a reddish to dark purple color that may reach 8 cm in length. It is grown in sunny or partially sunny environments. The taste of this plant has a pleasant sweetness and a little tartness. It is typically dried.

Consumption: Traditionally used both fresh and dried. In the national cuisine, fresh basil is added to vegetable salads, drinks, or served on the table with other fresh herbs (coriander, mint, parsley, etc.). Also, basil seeds are added to drinks, soups, and pates to give a special flavor. The herb flavor of dishes is usually perceived gradually, as a slight bitterness followed by a sweet note.