



# Plants in Caucasian ritual bread traditions: An ethnobotanical and etymological study

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## Research

### Abstract

**Background:** The Caucasus maintains rich ethnobotanical traditions where plants play central roles in religious and ritual practices. In recent decades, however, much of this traditional knowledge has been lost. While medicinal and food plants have been studied, the ritual significance of plants in food preparation and etymological connections between vernacular plant names and ancient religious practices remain unexplored. This study examines plant use in ritual bread traditions across three Caucasian regions.

**Methods:** The research is based on semi-structured interviews and participant observation conducted in 2024-2025 in three geographical regions of the Caucasus: Svaneti, the Pankisi Gorge, and the Adjara-Kobuleti region. Plants mentioned by informants were identified in collaboration with local populations, linguists, and botanical experts. Etymological analysis was conducted using comparative-linguistic methods and published etymological dictionaries.

**Results:** Three ritual bread traditions were documented: Svan *kut-lemzir*, Kist *ch'aabilg*, and Adjara *sisamiani khach'ap'uri*. In these traditions, plants serve not only as culinary ingredients for fermentation and aromatization but also as essential ritual elements. The study focuses on three plants – **kut-k'vakh** (*Plantago major* L., *Plantago lanceolata* L.), **kho** (*Humulus lupulus* L.), and **sisami** (*Nigella sativa* L.) – revealing how botanical knowledge, linguistic terms, and ritual practice are connected. Their vernacular names reflect Proto-Iranian, pre-Greek, and Kartvelian roots associated with ancient religious practices.

**Conclusions:** Ritual bread-baking traditions remain vibrant – families continue to pass down both the practical techniques and the ritual knowledge. Plant names carry cultural memory of pre-Christian practices and cross-cultural contact. Documenting these traditions helps preserve cultural heritage and the diversity of local plant uses. Future research should expand to other Caucasian regions.

**Keywords:** Caucasus, ethnobotany, ritual bread, traditional knowledge, plant name etymology.

## Background

Plant cults and ritual practices form a rich and varied cultural-religious tradition that reflects humanity's centuries-old relationship with nature. Research in ethnobotany and the anthropology of religion shows that the sacred status of plants depends on multiple factors: their distinctive appearance, fragrance, pharmacological properties, mythological narratives, and ritual practice.

The Caucasus is notable for its cultural and linguistic diversity, and this diversity extends to ethnobotanical traditions. Plants have long been central to religious and ritual practices in the region (Pieroni & Söukand, 2019). In recent decades, however, globalization and social change have contributed to the loss of traditional ethnobotanical knowledge, placing long-established ritual practices at risk (Jaimoukha, 2005). Previous ethnobotanical research in Georgia has focused primarily on medicinal and food plants (Bussmann *et al.*, 2016a; Bussmann RW. 2017). The ritual significance of plants in sacred bread-making and their etymological connections to ancient religious practices have not been systematically studied. Our research addresses this gap through ethnobotanical fieldwork combined with linguistic analysis.

In the ritual-religious life of various Caucasian ethnic groups, bread acquires profound symbolic significance. Ritual bread traditions across these cultures reveal common features: the process and space of bread-baking are perceived as sacred, form and quantity carry symbolic weight, and bread connects the living to the memory of the deceased, reflects cosmogonic representations, and embodies the ethics of hospitality. Simultaneously, each ethnic group maintains distinct forms, names, and rituals that reflect the region's rich ethnocultural diversity. Plants function as more than culinary ingredients in these traditions – they serve as essential elements that determine the religious status and symbolic meaning of ritual bread.

The aim of our research was to examine the tradition of preparing three types of ritual bread: Svan *kut-lemzir*, Kist *ch'aabilg* (variants: *chep'algash*, *ch'aabilgish*), and Adjara *sisamiani khach'ap'uri*. We focused on three plants – **kut-k'vakh** (comprising *Plantago major* L. and *Plantago lanceolata* L.), **kho** (*Humulus lupulus* L.), and **sisami** (*Nigella sativa* L.) – examining their symbolic significance, ethnobotanical aspects, and cultural-religious context, as well as the etymological and linguocultural dimensions of their names. We aimed to document regional ethnobotanical knowledge and explore the role of these traditions in maintaining cultural identity and ethnobotanical heritage.

## Materials and Methods

### Study area

Ethnobotanical research was conducted in three distinct geographical regions of the Caucasus: Svaneti (43°00'N, 42°30'E; Samegrelo-Zemo Svaneti region), the Pankisi Gorge (42°37'N, 45°22'E; Akhmeta Municipality, Kakheti region), and the Adjara-Kobuleti region (41°49'N, 41°46'E; southwestern Georgia).

Svaneti represents a historical-ethnographic region in the northwestern Caucasus where ancient Kartvelian language and ritual traditions have been preserved. The Pankisi Gorge is inhabited primarily by Kists – an ethnic group of Vainakh (Chechen-Ingush) origin. The Adjara-Kobuleti region, located along the Black Sea coast, has rich culinary traditions and ethnobotanical diversity.

### Ethnobotanical interviews

We conducted ethnographic fieldwork using semi-structured interviews, participant observation, and knowledge sharing with local informants. Field research took place in 2024-2025. Participants ranged in age from elderly people who maintain ancestral traditions to younger community members. All interviews were conducted with oral informed consent. Interview topics included traditional methods of ritual bread preparation, plant identification and collection, symbolic and ritual significance of ingredients, and plant and bread terminology. The demographic characteristics of the informants who participated in the study are presented in Table 1.

### Plant identification and analysis

Plants mentioned by informants were identified in collaboration with local populations, linguists, and botanists. We documented plant names in Svan (Kartvelian), Kist (Vainakh), and Georgian (Adjara) dialects, as well as in Latin nomenclature. For etymological analysis, we used comparative-linguistic methods and published etymological dictionaries.

Table 1. Demographic characteristics of study participants.

Name	Gender	Age	Education	Occupation	Region
Nana Shukvani	F	52	Professional music education	Small business owner, family guesthouse "Niguriani's 12th-century Tower"	Mestia, Svaneti
Nana Gerliani	F	56	Higher (pedagogy)	Primary school teacher	Village Etseri, Mestia Municipality, Svaneti
Nino Tserediani	F	58	Higher (PhD, history)	Head of Archaeological and Historical Research, Svaneti Museum of History and Ethnography	Mestia, Svaneti
Gia Mutoshvili	M	60	Higher	Ranger, Batsara-Babaneuri State Reserve	Akhmeta Municipality, Pankisi
Leila Achishvili	F	59	Higher (theatre/acting)	Small business owner, family hotel in village Jokolo; soloist, Chechen Folklore Ensemble "Pankisi"	Akhmeta Municipality, Pankisi
Migo Margoshvili	F	75	Secondary	Village elder and <i>zikh</i> (prayer) reciter	Village Duisi, Akhmeta Municipality, Pankisi
Nargiz Akhvlediani	F	54	Higher (PhD, philology)	Chief researcher, BSU Niko Berdzenishvili Institute	Batumi, Adjara
Nunu Khazaradze	F	76	Higher (physics and mathematics)	Former lecturer, Batumi Navigation University	Batumi, Adjara
Asmat Akhvlediani	F	55	Higher (philology)	Notary assistant	Batumi, Adjara
Merab Gagloevi	M	68	Higher (fine arts)	Sculptor	Tbilisi
Mariam Bezhitashvili	F	37	Higher (philology, Ingush studies)	Director, Ingushian Cultural Center of Tbilisi	Tbilisi

Summary: N = 11; Female = 9 (82%), Male = 2 (18%); Age range: 37–76 years; Education: secondary = 1, higher = 10 (of whom PhD = 3)

## Results and Discussion

### *kut-k'vakh* (*Plantago major/lanceolata*)

In Svaneti, *diar* is the term for bread of any form, content, or purpose. An entire series of words derives from it: *diro-ob* – feasting/celebration, *me-l-diar* – eater, *li-diar-i* – feeding, *le-diar-i* – provisions, and so on. Even the word for wedding in Kartvelian languages is connected to *diar* (Javakhishvili, 1979). Semantically, *diar* must have signified mother's bread, which is not at all surprising, since agricultural work was traditionally a woman's responsibility, just as hunting and livestock-raising were men's work. After all, *di* means mother in Svan, while *ladiar*, *ladyer* means maternal homeland (Chukhua, 2017).

The Svan language, one of the oldest spoken Kartvelian languages, is divided into ordinary (everyday) and sacred vocabulary based on its theonymic system. This theonym system determines the existence of both sacred and everyday speech. In Svaneti, sacred speech begins with the word *mzir*, which forms the foundation of religious expression and shapes the pre-Christian worldview. Ivane Javakhishvili, in studying the etymology of sun and moon, notes that "the full form of the sun's name is *mzira/mzera* and *mzhara*, alongside which stands the Svan *mizh* (*mizhara*). On the other hand, the name for moon – Chechen *mazer*, Kabardian *maza*, Abkhaz *amza* – suggests that the sun's name was originally indeed a general term for a luminary, i.e., a participle or adjective, and only later became the term for sun in Georgian, while in Abkhaz-Circassian it became the term for moon" (Javakhishvili, 1979).

Five nouns derive from the lexeme *mzir*, which together form a system of faith and worship: deity (*mzir*), offering (*lemzir*), place of offering, grace reciprocated through prayer (*lamzer*), and offerer (*memzir*) (Tserediani, 2023). A round, flattened

bread remains ordinary food bread (*diar*) until three *lemzir* are placed on it; once three pieces are placed, it becomes *le-mzir* (ritual bread) (Tserediani, 2023). *Lemzir* literally means for-*mzir*, that is, created for *mzir*, dedicated and destined for it. Among the varieties of *lemzir* is *kut/kutv* – *khach'ap'uri*, cheese-filled bread. According to the filling, Svans distinguish varieties of *khach'ap'uri* (*kut*). As Al. Davitiani writes: "K'vakh (empty) bread is baked on ordinary days. Whatever it is made of, it is called the same. When mentioned separately, the name of the grain from which it is made is stated along with the bread: wheat bread, corn bread, barley bread, millet bread... Even more diverse is filled bread in Svaneti, that is, *kut*. According to the type of filling, we have differently named *khach'ap'uri* (*kut*) in Upper Svaneti... *Kut* primarily refers only to cheese-filled bread, and then whatever different filling there may be: potato, beans, beets, and anything else that is mixed in, it is also called *khach'ap'uri*, but in the name of such *khach'ap'uri* the name of the filling is mandatory" (Gazdeliani & Chkadua, 2015).

*Kut-lemzir*, ritual *khach'ap'uri*, is baked primarily for women's holidays, during *uts'enaloba* – the day when the ritual is performed only by women. *Kut-lemzir* is an offering to the deities Lamaria and Dal Ieshkhuamisa; people entreat them for the abundance of everything, the multitude of dairy livestock, and the well-being of the women who care for them. *Kut-lemzir* serves as offering to the creator of the universe – a sacrifice to Dabdaba (the Creator) Lamaria, and a supplication to Gimji (Earth) Lamaria and Keri (Hearth) Lamaria. All these deities are connected to the feminine essence – expressed through earth, sky, humans, or livestock (Fig. 1, Fig. 2). *Kut* is not intended for male deities; theirs is *kubdi-lemzir*, which ethnographic material also confirms. Only women may *bake kut-lemzir*, recite prayers, and make the fresh cheese, called *tot* in Svan (Georg. *toto* – newborn child), creating a symbolic link between fresh cheese and new life. Men are forbidden from participating or even witnessing (Tserediani, 2023).

As Merab Chukhua notes, the genuinely Georgian character of the *khach'ap'uri* tradition is evident from the fact that the language attests a synonymous word *k'ada* (with filling; bread filled with something), whose regular equivalent is Svan *kadaar*. The regular equivalents of the Kartvelian *kada/kadar* should be Tsova-Tush *kot'ar* (flatbread with some filling) and Chechen *kodan* (meat-filled flatbread). In Chukhua's view, the Svan *kutv* (*khach'ap'uri*) constitutes a separate category and appears to be a word of pan-Georgian origin. Equivalents are sought for it also in Daghestanian: Northern Daghestanian *ku(r)tu* (flatbread, bread); Lezgian *kut* (type of bread). Regular equivalents to the Svan-Daghestanian isoglosses do not appear in the Nakh and Sindi group languages (Chukhua, 2021).



Figure 1 and Figure 2. *Kut* prepared by Nana Shukvani

How was the cheese itself, the filling of *kut* and one of the important attributes of ritual culture, supposed to be created? According to scientific estimates, the history of cheese spans four millennia, while cheese vessels found in Georgia are eight

thousand years old. Thus, food with cheese filling must be an ancient product. An experiment by Nino Tserediani, Head of Archaeological and Historical Research in Svaneti Museum of History and Ethnography, confirmed that one of the important attributes of ritual culture – the production of cheese using plant-based rennet, without animal rennet – is possible. The plant used is plantain: **kut** – "female," broadleaf (*Plantago major* L.) and **k'vakh** – narrowleaf, "male" (*Plantago lanceolata* L.), which is distinguished by its medicinal properties (Busmann *et al.*, 2014; Busmann *et al.*, 2016b; Kazancı *et al.*, 2020). In Latal and Tskhumar, it bears the name of bread – *kut-k'vakh* (*kut* – cheese-filled bread *khach'ap'uri*, *k'vakh* – bread without filling). A paper related to this experiment was presented at the international scientific conference "The Black Sea Region at the Crossroads of Civilizations - IV" (Chotalishvili *et al.*, 2025).

Ivane Javakhishvili explains that the grass first used as food in Georgia must have been called *diar*, and bread-eating (meal) and wedding in Kartvelian languages are connected to this same root (Bregadze, 1987). Consequently, it is possible that the use of plantain as an ingredient is reflected in the naming of this ritual dish as **kut**. Plantain appears to have been originally used for cheese-making, which explains the dish names: *kut* (cheese-filled bread) and *k'vakh* (plain bread without filling).

The root attested in the Svan name for *khach'ap'uri* may reflect the pre-Greek *κῦτ-* and the Kartvelian *\*kut-* root, which was reconstructed at the pan-Georgian level by H. Fähnrich – Georgian *kurd-/kut* (*kut-n-a/ga-mo-kut-n-a*); Mingrelian *kvirt-i*; Svan *kvit-*, *kvt-* ("thief", i.e., plunderer) (Fähnrich, 2007). This root, according to researchers' assumptions, forms the basis of the toponym Kutaisi. This toponym is found in the most ancient versions of the Argonauts' legend and is not based on Greek etymology. *Κύταια/Κυταία* is mentioned by various authors from the Hellenistic period onward as the main city of legendary as well as historical Colchis, which is the homeland of Medea. Stephen of Byzantium writes: "...according to some, there are two *Κύτα* – the local one and the European one. There is also a city *Κύταιον* on Crete" (Steph. Byz. Ethn.). It appears that the city *Κύταιον* mentioned by Stephen of Byzantium already existed on the island of Crete in the Mycenaean period, as confirmed by its multiple mentions in Mycenaean Linear B documents. R. Brown considers the geographical name *Κύταιον* to be pre-Greek and indicates that it must have a connection to the birthplace of the Colchian Medea, *Κυταία*, which appears in sources in several variants: *Κύτα*, *Κύτη*, *Κυταίς*, *Κυταίς*, *Κύτηϊς*, and others (Brown, 1985). This toponym appears in Greek sources from the Hellenistic period, which might lead us to think it is of relatively late origin; however, it appears that the name of Aeëtes' residence was not created in the Hellenistic era. This is supported by the name of Phrixus' son *Κυτίσωρος* (whom Herodotus already knew) and the names of cities located in Anatolia: *Κύτωρος* (Paphlagonia), *Μασσί-κυτος* (Lycia), and possibly *Κότα* (Caria). The toponym Kutaisi itself is attested with regular correspondences in all three Kartvelian languages: Georgian *Kutaisi*; Mingrelian *kuteshi*; Svan *kutashi*, which gives us grounds to assume that this settlement or residence already existed during the period of pan-Georgian circulation (Chotalishvili, 2019).

In R. Beekes' etymological dictionary, lexical formatives containing the *κῦτ-* root are attributed to the pre-Greek lexical fund, which does not submit to Greek etymology: *κύτινο* – pomegranate flower bud, *κύταρον* – ladle, spoon, *κύταρος* – beehive, *κύδαρος* – small boat, *κυτταί* – nests, boxes (Beekes, 2010). R. Brown, based on the analysis of various formatives, concludes that the meaning of the pre-Greek *κῦτ-* root must be "hollow receptacle" (Brown, 1985).

The Kartvelian *\*kurt-/\*kut-* root, according to M. Chukhua, must derive from the Common Kartvelian stem *-\*kart-(a)*; Zan - *kurta/kuta* (enclosed, bounded place > city) (Chukhua, 2000-2003). Consequently, *κῦτ-/\*kut-* must have designated a hollowed, enclosed, bounded, protected place or object: ladle, bud, scoop, beehive, nest, box, ship (cf. Common Kartvelian *\*kurt*; Svan *kut-ul* – knee, elbow; Svan *kup* – ark, vessel for storing strained cheese, nest).

We propose that the semantics of the root reveal something deeper: the naming of both the plant and ritual bread comes from the common *-kut* root, which may correspond to the archetypal "image" and "function" of the creator of the universe associated with the feminine principle. We see this in the ritual practice – *kut-lemzir* is an offering to Lamaria and Dal leshkhuamisa, baked on the day when only women perform the ritual. In Svaneti, women held responsibility for managing agricultural products, distributing and spending grain reserves, storing them in *guemi*, baking *lemzir*, and conducting all ritual procedures. The sacred language and the initial layer of rituals are also connected to women; in Svan tradition, the sacral essence of the hearth and that of the woman are considered the same; accordingly, the symbolism of hearth, dwelling, family, earth, and woman is of identical nature. It is significant that **kut** is the name for "female" plantain, while the suffix "th", "eth", "oth" is considered a feminine word ending (Javakhishvili, 1979). We believe the issue requires special interdisciplinary study.

**kho** (*Humulus lupulus*)

Ethnographic research has shown that almost every type of *khach'ap'uri* found in Caucasian culture retains a ritual function. A study conducted by the Gastronomy Association over two years registered more than 50 types of *khach'ap'uri*, each with its own regional and ritual characteristics (Gurian Christmas flatbreads, Rachan *ganat'ekhi khach'ap'uri*, Ossetian *khabidzgina*, Mtiuletian *ch'akhrak'ina*, Kist *ch'aabilg*, Svan *lemzir*...). On January 22, 2019, the National Agency for Cultural Heritage Preservation of Georgia inscribed "The Tradition of Khachapuri in Georgia" on the List of Intangible Cultural Heritage Monuments (National Agency for Cultural Heritage Preservation of Georgia, 2019).

The ritual purpose of *khach'ap'uri* blended with Christian customs – bread embodies the central symbol of Christian culture, the Holy Body of the Savior, which explains its special sacred status. This religious syncretism preserved the tradition of *khach'ap'uri* as a ritual dish while allowing its adaptation to a new religious context.

In the Kist tradition of the Pankisi Gorge, a distinctive form of *khach'ap'uri* is *ch'aabilg*. Families have preserved the ancient technology of preparing this ritual bread, passing it down from generation to generation. Leila Achishvili (59 years old), from the village of Jokolo in the Pankisi municipality, learned the traditional method of preparing *ch'aabilg* dough from her grandmother, Elizabet Mutsoshvili, and still uses it. According to her: "In Pankisi, we prepare the dough from the rock plant **kho**, which we gather in summer, dry, crumble, store in a cool place, and then use as a starter throughout the year. We pour lukewarm water over the already stored, crumbled **kho** and keep it this way in warmth for several days. We strain the water from the warm infusion and add a small amount of mixed corn and wheat flour together, recite a prayer, and wait four to five days. For the prepared mass to turn out well, it must be kept wrapped warmly. Frequently, every time the dough rises, it is kneaded. When the dough falls, grows heavy, and becomes "pregnant" (we call such dough *bod*), we begin baking *ch'aabilg*" (Fig. 3).

Another traditional technology of dough preparation documented in Pankisi is connected to corn (*Zea mays* L.). As one of our informants, Migo Margoshvili (75 years old, Pankisi), recalls: "Before they understood **kho**, the elders would soak corn in hot water to make the dough rise, then take it out, strain it in a special container, and place it under the oven to dry and crumble. They would grind it on a millstone – the work would be done – such corn was called *doolush*, and this kind of work too. They would warm water, throw this *doolush* (crushed) ground corn (*mch'adi*) flour into it, and knead it several times; this mass would become a liquid like beer. They would wrap it up well and warmly, and it would begin to ferment, sour, until it completely collapsed and fell, then they would add wheat flour again. This flour was basically all black. After two or three days, they would knead it with flour again and leave it outside for one night, then transfer it to a jar and share it with the entire village." The elders mentioned by our informant are the older generations of her community who passed this knowledge down to her. As these practices have not been systematically documented, the chronological relationship between *doolush* and **kho** as fermentation methods remains unclear. By the same token, it is possible that similar fermentation techniques were practiced with locally cultivated grains before maize reached the region, though this requires further research.

These two technologies – one based on *doolush*, the other on **kho** – reflect the richness of Kist culinary tradition. Despite their differences, both retain a ritual character: reciting prayers while kneading the dough, patiently tending it for several days, waiting for the dough to become "pregnant," and ultimately sharing it with the entire community. This shows that corn and **kho** function as both fermentation starters and ritual elements that connect people to one another and to sacred space.



Figure 3. *Ch'aabilg* prepared by Leila Achishvili

Kist speech represents a mixture of various dialects, subdialects, and speech patterns of the Chechen language that has developed over centuries in the Georgian linguistic environment (Pangloss Collection, 2024). This linguistic diversity is reflected in the naming of *ch'aabilg* (Pareulidze, 2022): in English and Russian sources, we find the transcription *Chep'algash* (Russian *Чепангаш*, Chechen *Членангаш*), which reflects the phonological system of standard Chechen (lowland dialect, Ploskost). In Georgian-language sources, two main variants are recorded: *chep'algash* and *ch'aabilg* (or *ch'aabilgish*), of which the latter is more frequently used by the Kist population of the Pankisi Gorge. These variations are conditioned by the phonetic and morphological peculiarities of the Kist dialect (Kistin), and Georgian lexical influence must also be taken into account.

Beyond everyday consumption, *ch'aabilg* has an important ritual function, playing a special role in Chechen wedding ceremonies. The scientific literature describes the so-called “water ritual,” performed on the third day of the wedding: a pin attached to the bride’s dress was placed in the center of the *ch'aabilg*, after which the bread was thrown into water. Following the ritual, the young woman gained the right to fetch water for her new family for the first time (Khasbulatova *et al.*, 2023). The ritual carries layered symbolic meanings: the pin protects against the evil eye; throwing the bread into water symbolizes purification and the expulsion of evil spirits; and fetching water for the first time marks the young woman’s transition to her new life in her husband’s family.

We could not find the plant name **kho**, through which the natural leavening and processing of dough occurs, in dictionaries; Gia Mutsoshvili (60 years old), ranger of Batsara-Babaneuri State Reserve, and Mariam Bezhitashvili, director of the Tbilisi Ingush Cultural Center, helped us identify it. Research confirmed that by the name **kho**, the Kist-speaking population of the Pankisi Gorge refers to the plant hop (*Humulus lupulus*), which belongs to the hemp family (Cannabaceae). According to respondent Nana Gerliani (56 years old, Svaneti), natural yeast was previously prepared from hop in this region as well.

The Kist word **kho** is phonologically and semantically close to the Avar **khomelleg** and Ossetian **khymællæg** names for hop (*Humulus lupulus*) (Abaev, 1989). The Ossetian form is confirmed by respondent Merab Gagloev (68 years old, Tbilisi), who states that **khumaalaag** designates hop in Ossetian (according to M. Gagloev’s oral account, **khumaalaag** – by literal translation from Ossetian – means “skinny pig”). The Kist population of the Pankisi Gorge maintained contacts over centuries with both the peoples of the Northeast Caucasus (Avars) and the Central Caucasus (Ossetians), explaining these lexical parallels.

Kist **kho** may represent a shortened variant of the proto-form *kho-mellæg*. According to V. I. Abaev's etymological research, the Avar **kho-mellæg** and Ossetian **khuy-mellæg** themselves derive from Proto-Iranian *\*hauma-arayka-* through a Sarmatian intermediate form. From Sarmatian dialects, this lexeme spread across Eurasia and produced a broad group of related words: Russian **khmel'**, Chuvash **khämla**, Finnish **humala**, Hungarian **komló**, Moldovan **komla**, Avar **khomelleg** (Abaev, 1989). In Old Iranian religious tradition, haoma had a dual status: it was simultaneously a ritual drink and a personified deity. As a drink, haoma was prepared by crushing a sacred plant and, according to belief, bestowed health, fertility, and immortality upon its consumers (Haoma, n.d.). As a deity, haoma was associated with Amesha Spenta Vohu Manah, the guardian of the animal world (Boyce, 2012). Achaemenid royal inscriptions mention a group of Scythians called Sakā haumavargā (𐎎𐎠𐎧𐎡𐎹𐎷𐎡𐎹 𐎧𐎡𐎹𐎷𐎡𐎹) – "Scythians who arrange haoma plants around the fire" or "Sakas who drink haoma" (Schmitt, 2000). This ethnonym confirms the spread of the haoma ritual among Scythian tribes (Narain, 1987).

Historically, Kist and Vainakh culture has rich traditions of ritual and festive beverages, in which hop (*Humulus lupulus*) occupies a special place. The Kist ritual beer *isthi* was not an everyday drink – it was prepared and consumed at traditional religious celebrations held in honor of deities, or during harvest rituals. According to belief, ritual beer was filled with divine power, and drinking it strengthened the connection with the gods and ancestral spirits. Only female plant flowers – the so-called "cones" – are used for brewing and medicinal purposes. Therefore, in commercial farms, male plants are carefully removed so that female flowers do not become pollinated and seeds do not develop (cf. **kut** – "female" plantain; the metaphor of dough "becoming pregnant").

#### **sisami (*Nigella sativa*)**

According to Leila Achishvili, a distinctive characteristic of *ch'aabilg* is the large quantity of green onion (*Allium cepa* L.) added to the filling, which is atypical for classic Georgian *khach'ap'uri* and marks *ch'aabilg* as distinct from other varieties (Kemper, 2023; Layton, 2014; Kurtsikidze and Chikovani, 2002). Green onion is also widely found in ritual dishes of various regions of the Caucasus. For example, in Svaneti, wild green onion (**ch'lak'vi**) is mixed with cheese, and such filled *khach'ap'uri* is called *ch'lak'viani khach'ap'uri*. A similar tradition is also attested in the Adjara-Kobuleti region: in ritual *khach'ap'uri* (*sisamiani khach'ap'uri*), two main plants are used – **sisami** (*Nigella sativa*) and white onion (*Allium cepa* L.).

Duniadar Khutadze, whose family originated from Circassia in the North Caucasus, was the great-grandmother of one of the researchers (Nargiz Akhvediani) involved in this study. The Khutadze family, among the oldest in Kobuleti, eventually had only two daughters, both of whom married into the Inaishvili family. Duniadar passed the tradition of baking *sisamiani khach'ap'uri* to her descendants. This tradition passed from mothers to daughters and remained within the family. The tradition is still maintained in Adjara today.

The preparation follows specific steps. First, onion must be wilted in salt – a process locals call "killing" the onion. Then it must be thoroughly washed and drained so it can be mixed with cheese as filling. Small black seeds – **sisami**, as it is called in the Adjara-Kobuleti dialect – are sprinkled on top of the *khach'ap'uri*. The preparation of *sisamiani khach'ap'uri* required the recitation of special prayers, showing that the entire process, not just the ingredients, was considered sacred.

The synonyms of **sisami** (*Nigella sativa*) in Georgian dialects are diverse: in Gurian – **shavk'ak'ala**; in Adjaran – **sisami**, **tsisami**; in Mingrelian – **ucha k'ak'ali**. In Sulkhani-Saba Orbeliani, it is mentioned as **ik'vlivi**; in Rapiel Eristavi – **surija**; in Davit Chubinashvili – **ch'orakot'i**; in Ivane Javakishvili – **chit'istvala**, **soniji**, **solinji** (Makashvili, 1961; Mehdiyeva *et al.*, 2017; Chotalishvili *et al.*, 2023).

Informants report that **sisami** was considered a sacred seed and was used in various rituals, particularly in ceremonies related to death, for commemorating the deceased. The ritual purpose of **sisami** included calming the soul, illuminating the path to the afterlife, and protection from evil forces. According to local tradition, **sisami** seeds were sprinkled on the eyes of the deceased to protect the soul on its journey.

## **Conclusion**

Plants are central to ritual bread-making in the Caucasus, utilized both in traditional worship and as daily food. The examination of three ritual breads – Svan *kut-lemzir*, Kist *ch'aabilg*, and Adjaran *sisamiani khach'ap'uri* – revealed how ethnobotanical knowledge, linguistic terms, and cultural identity are connected.

Each plant has a distinct role. In Svaneti, **kut** (*Plantago major*) curdles milk into cheese for women's ritual offerings to female deities. Notably, the ritual bread *kut-lemzir* and the plant share the same root – kut – pointing to a long historical connection between the two. In the Pankisi Gorge, **kho** (*Humulus lupulus*) serves two ritual purposes: fermenting dough for *ch'aabilg* and brewing *isthi*, a sacred beer for religious celebrations and harvest rituals. In Adjara, **sisami** (*Nigella sativa*) connects the living and the dead – people sprinkle these black seeds on the eyes of the deceased and on commemorative bread for protection and remembrance.

Despite their different functions, preparation of these plants follows common ritual patterns. Hop is gathered from rocks and preserved as fermentation starter, onion is wilted in salt through ritual "killing," dough is tended patiently for days while prayers are recited. In the case of *kut-lemzir*, the entire process is exclusively women's work – only women may bake the bread, recite prayers, and make the fresh cheese (*tot*); men are forbidden from participating or even witnessing. These acts transform ordinary ingredients into something sacred, and the plants themselves work as both practical tools and cultural symbols.

Some of these traditions link botanical knowledge to feminine symbolism. In Svaneti, plantain has names distinguishing "female" (**kut**) and "male" (**k'vakh**) varieties. It is specifically the "female" term – **kut** – that forms part of the ritual bread's name, *kut-lemzir*, offered to female deities. In the Pankisi Gorge, only female hop flowers are used for brewing *isthi*, and people describe the rising dough as "becoming pregnant" (*bod*). These patterns suggest that in certain Caucasian traditions, plant biology and ideas about feminine creation overlap in ritual practice.

Behind these names lies cultural memory of ancient religious practices and long histories of contact between peoples. Proto-Iranian \*hauma survives in **kho**, pre-Greek κῦτ- and Kartvelian \*kut- underlie **kut-k'vakh**, and **sisami** appears in diverse dialectal forms across the region.

These traditions continue today. Families still pass down the practical skills and ritual knowledge from one generation to the next. As globalization erodes traditional ways of life, documenting these practices is urgent – not only for cultural heritage but for diversity of local plant uses, since ritual customs often preserve knowledge of plants that would otherwise be forgotten. A full understanding requires combining linguistics, anthropology, religious studies, and ethnobotany. Future work extending this approach to other parts of the Caucasus will help give a fuller understanding of how plants have shaped the ritual and culinary life of the region.

## Declarations

**List of abbreviations:** There are no abbreviated terms used in this manuscript.

**Ethics approval and consent to participate:** All ethnobotanical research activities were conducted in accordance with ethical and legal guidelines for research on traditional knowledge. Oral informed consent was obtained from all participants prior to data collection.

**Consent for publication:** All participants named agreed to have their names included in the publication

**Availability of data and materials:** The ethnobotanical data supporting the findings of this study are stored by the authors and are available upon reasonable request.

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