From the Steppe to Space: Portable Power of *Qurut*!

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ABSTRACT: *Qurut* in Turkic languages is the verb meaning 'to dry', and is the name given to one form of dairy used in the food of the Turko –Mongolian peoples. As it has traveled the region it is known differently. In the north and east of central Asia the name is some form of *qurut* but in the south and west it is known as kashk or similar. *qurut* is dry -usually ball shaped -pieces of yoghurt. Traditionally they were sun-dried but now with advanced dehydration technologies they are commercially dried or available in refrigerated sauce form. Its light, long lasting qualities are what made it a pastoral nomad's necessity. Gluts were transformed into sun-dried balls of nutrition which could easily be transported and transformed into a drink or meal without too many utensils or the need for fire. This made for a nutritious meal on the hoof for the conquering mongols and much more recently it was part of the supplies used by cosmonaut/s taking off from Baikonur.

'Oh, my God, it's not a rock! It smells like milk'
– Gertrude Platais, '*Qurut*'

Dairy is one of the main food sources of the pastoral nomads of central Asia, and has aided them in spreading their genes, language, culture, rituals and beliefs through their conquests from China to the Black Sea and beyond.[1]

Milk from various ruminants has been consumed by people in southwest Asia for millennia.[2] Over this period, various methods of preserving milk have been developed based on the available resources and technologies of the time, most of them, probably discovered by happenstance. In each case the resources available to these nomadic herdsmen and women, materials, climate and technology, have spurred this evolution and innovation.

In dry areas, the power of the sun has been utilised; in colder climates, the snow.[3] Either way, preserving food has helped mankind to prosper, offering nutrition in leaner months, a method of trade and in some cases a reliable starter for future dairy products.[4] Drying food was one of the first methods of preservation, not only allowing the food to last a long time but also as a result of dehydration, making the food smaller in size, lighter, and therefore portable.

There are many ways in which dairy is preserved in different cultures. In the central Asian plateau kefir and yoghurt are well documented. *Qurut*, an important food of this area and its peoples, is less well known. Preserving and fermentation are increasingly en vogue. On the Steppe, and in the nomadic life, preserved food is a necessity.

Qurut is dried yoghurt. As described in a line in the poem by Raisa Golubeva, above, in its traditional form, *qurut* resembles a chalky whitish apple sized rock.[5]

As with most dairy products, when fresh it is milder but as it matures the flavours strengthen. The flavour of *qurut* au nature, ranges from salty, tangy feta to

a very strong blue cheese-like taste, especially as it ages. I like to call the flavour 'animally'. It brings soft, aromatic richness and umami when added to dishes. My mother's favourite *qurut* was made with their buffalo milk. She said it had a certain sweet tang.

Regardless of its form, dry *qurut* can be a snack, when rehydrated a drink or when formed into a yoghurt like paste made into a meal. In the more elaborate Persian dishes such as Oshe Reshte or Kashke bademjan, made with fried onions, garlic, herbs and walnuts, *qurut* is a flavour enhancer. It has a blue cheese characteristic which adds umami and richness to a dish.[6]

There is doubt about where it was first made, how it came to be and its etymology, but there is no doubt that *qurut* is dried yoghurt and a preserved food common in the Turko-Mongolian regions. The etymology and use of the equivalent modern Iranian ingredient in Farsi, kashk, is better documented though.[7] It's the food of my homeland and heritage. The word *qurut* in my mother tongue (Azeri) is literally an order: 'Dry it.'

Fresh spring and summer gluts of milk were transformed into various products and consumed in season.[8] Some of the yoghurt which is unwieldy and without refrigeration and proper storage would not last the kooch (seasonal nomadic movement from summer pasture to winter pasture) was left to strain away the whey. In the southern regions more than the north of the Steppe, salt was added to increase its preservability and the stiff, salty paste was formed into round shapes, some flat, others spherical, some with a thumb mark and left out in the dry heat of the Steppe to dry out completely. This process, not only made the large quantities of milk, lighter and smaller in volume, more portable, but also the process made the *qurut* easier to digest. These compact, easily transportable calcium rich, protein packed balls of goodness were enjoyed in the winter and used to barter for goods and services. It can be made into a drink or meal without too many utensils or resources. This made for a nutritious meal on the hoof for the conquering Mongols and much more recently it was part of the supplies used by cosmonauts taking off from Baikonur.[9]

Depending on the season the milk is produced, the animal, method of making the yoghurt, the vessel it is made in, the starter culture and length of processing, there are many types of *qurut* with different texture and flavour characteristics. I loved reading Charles Perry's paper, *The horse back kitchen of Central Asia* ['..qara *qurut* is cooked down to a very thick consistency; there are tales of automobile radiators being patched with it...'].[10] Gurut is known, named and used differently in different geographic areas. In the north and east of central Asia, amongst the Turkic speaking countries the name is some form of *qurut* but in the south and west it is known as various forms of the word kashk in Farsi, kishk/jameed in Arabic, jortan in Armenian and aarull in Mongolian.[11] Not only is it named differently, but also it is different in style and use. Each region adapting recipes to their cuisine. Whether it is a powder or in balls it is a useful ingredient on the move and in the modern store cupboard or fridge. It is common to see colourful *qurut* in the bazaars of Uzbekistan, where the addition of nuts, herbs,

spices and berries give them interesting hues. These additions are made possible because of modern preservation and storage formulas and techniques. There are also low salt versions too. The tradition of sun-drying foods has been replaced with advanced dehydration technologies, commercially dried sometime with additives, also available in refrigerated pasteurised sauce form. These vacuum packed white chalky soulless balls lack the robustness of flavour which comes with time.

In Iran we usually serve gurut dishes with garlic and mint. In the Yunani medicine of the Persian/Arabic tradition, food is considered medicine and dishes are usually prepared such that they are balanced with 'hot' and 'cold' ingredients. Garlic is deemed cold and mint hot (unlike in the west where mint is considered cooling).[12] The hot food heat the humors up and the cold brings them down. I wonder whether it is not just for the taste combination or seasonal availability of these ingredients alone that they are consumed together; rather it may be the microbial effects of phytochemicals in the mint family (as whole) or allicin in garlic which might prohibit or reduce the effects of deterioration when included in the making of *qurut* and or detriment when consuming it? Either way, the ingenuity of these ancient foods is remarkable, how humans have found ways to not only make dairy more bioavailable but to partner it with ingredients which aid digestion and or reduce contamination or toxicity.

On that note, in Iran they say it is important when using *qurut* that you boil it and then allow the dish to simmer for a few minutes. We rarely eat it dry as a snack as they do in Kazakistan.[13] As with most traditionally processed food, it can go off and in the case of gurut types of C. botulinum may be present if it hasn't been processed or stored properly. Boiling doesn't kill the spores but it does get rid of the toxins they produce. Having said this, in a few studies in Iran it was found gurut was one of the least contaminated, however, it does occur and for this reason we don't consume gurut raw.[14] I have yet to find documents about *qurut* poisoning.

An interesting side note I found, which I thought was appealing, was that cultures who processed dairy are more lactose intolerant than those who consumed milk in its simple form. This has led to some snobbery and one-up-man-ship, in the former deeming the latter uncouth for consuming straight from the teat. There seems to have been a certain prestige attached to cultures who processed dairy and were consequently less able to digest raw milk![15]

Instead in these cultures fresh milk was used to sprinkle at weddings, behind a traveller or on a winning horse's head, and played a role in sacred or ritualistic symbolism.[16] All dairy known as white products was not only food but also had symbolic meaning. Held in great esteem, bringing health, wealth and longevity. Even today in Iran, one of the main alms dishes offered as thanks on certain religious and high days, Ashe reshteh contains *qurut*.

Researching about *qurut*, what it is called, how it is made, where it is from and its benefits culturally, nutritionally and for world domination and space travel, I decided to make some. It took over a week and in Bath's damp climate in February

it was quite a todo. I used a lot of electricity to run an oven overnight to dehydrate a handful of balls, rendering it uneconomical for a small quantity. Maybe I should have borrowed a dehydrator. However, the reduction in weight and size was remarkable. I was left with 15 walnut size light balls.

I started by leaving a one kilogram unopened pack of organic full fat yoghurt on the kitchen counter for a week, I then put it in a cheesecloth, covered and left it to strain for another 3 days. After that it was quite stiff and reduced by a third. I put some flour on my hands and took bits which I rolled into balls. I put them on a piece of parchment paper, covered them with a light cloth and left them for another 3 days. In my case all this was done in a modern heated home in the UK. I then worried it would go off, so I put it in the oven with the light on overnight. I took them out, let them cool and froze them. I'm not sure if I'm going to eat them even though they looked and smelled ok.

When I was thinking back to my first memories of *qurut*, I remembered the noise of its preparation more than the flavour. There was a particular muted rhythm of the rock hard balls being rolled around in water in a large, open, rough textured ceramic bowl, similar to a suribatchi. It had a particular wet clanking noise to it. My mother would sit on the floor with the bowl in front of her and roll one way then the other way, it was a labour of love and we all love Ashe reshshte and *qurut* with aubergines. I am not sure whether I'll eat it but if mine has hardened to a rock like ball then I might just rehydrate it to hear that sound again.

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Notes

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[7] Charles Perry, 'Note from Lady Carolyn Conran' Petits Propos Culinaires, (1983). Françoise Aubaile-Sallenave, 'Al-Kishk': the past and present of a complex culinary practice', in Sami Zubaida and Richard Tapper, 'A Taste of Thyme: Culinary Cultures of the Middle East', London and New York, (1994 and 2000).
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[9] Oskenbey; Armitage.
[10] Charles Perry, 'The horseback kitchen of Central Asia' Food on the Move: Proceedings of the Oxford Symposium on Food and Cookery, London Prospect Books (1996).
[11] Aubaile-Sallenave.
[12] Similar to ying yang in China or Ayurveda in India.
[13] Uteuova,
[14] H.R. Tavakoli, M. Aghazadeh Meshgi, N. Jonaidi Jafari, M. Izadi, R. Ranjbar, A.A. Imani Fooladi, 'A survey of traditional Iranian food products for contamination with toxigenic Clostridium botulinum', Journal of Infection and Public Health, Volume 2, Issue 2, (2009).
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