

Worth Your Salt: a Short History of Salt and Commerce

Come and learn about how salt was mined, what it was used for,
and how it factored into ancient tax schemes!

Developed for Yule Feast 2023: Saturnalia (Dec. 9, 2023, A.S.LVIII)

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Outline:

1. Salt Production
2. Place names and root words
3. Before Rome – Salt trade in Europe, Asia and Africa
4. Roman Salt production
5. Revenue and Commerce, the Rise and Fall of Empires

This course was developed with the event theme of the Roman festivals in mind, so most of the trade routes lead to Rome in the course.

Halite, more commonly known as rock salt, is a mineral formed from sodium chloride (NaCl) and includes other variations of salt such as common salt and table salt. Rock salt tends to be the industrial name used for Halite for salt mined to melt ice on roads and other uses.

Natron or native soda, a natural compound of sodium salts ($\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}$), was also a very important salt in ancient history. It was produced in Egypt, Middle East and Greece and used for medicine, cookery, agriculture, in glass-making and to dehydrate mummies. Natron is the German-speaking world's term for baking soda (not to be confused with baking powder, or soda ash). The natural occurring form of Natron is a mixture of sodium carbonate decahydrate ($\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}$, a kind of soda ash) and around 17% sodium bicarbonate (also called baking soda, NaHCO_3) along with small quantities of sodium chloride and sodium sulfate.

Where do we get salt and Why do we want it:

1. Salt Production

a. Methods

- i. Brine Evaporation techniques including using lead (Roman), earthen or iron (China) boiling pans to reduce lake or sea water to salt
 1. In Britain, lead salt pans were used by the Romans at Middlewich, Nantwich and Northwich and excavations at Middlewich and Nantwich have revealed extensive salt-making settlements. <https://saltassociation.co.uk/education/salt-history/early-history/>
 2. Sea salt (simplified Chinese: 海盐; traditional Chinese: 海鹽; pinyin: hǎiyán) https://en.wikipedia.org/wiki/Salt_in_Chinese_history
 3. Lake salt (池盐/池鹽; chíyán)
 4. Earth salt (土盐/土鹽; tǔyán): found in sand from the dried beds of ancient inland seas in Western areas and extracted by rinsing it to produce brine
- ii. Rock Salt Mining happens underground with the salt being physically scraped or dug out of the ground. Note: Bronze does not rust. Rock salt (岩盐/岩鹽; yányán): found in caves in Shaanxi and Gansu.
- iii. Solution Mining water is pumped into the underground rock salt deposits to create brine that is then pumped back out to the surface. The brine is then evaporated in huge evaporating vessels to make the familiar white salt. Well salt (井盐/井鹽; jǐngyán): Sichuan, China: Deep borehole drilling technology tapped subterranean salt pools, which also produced the natural gas used to boil it

- b. Trade - as noted in <http://kiwihellenist.blogspot.com/2017/01/salt-and-salary.html>
 - i. significant strategic resource
 - ii. single most common preservative agent ever used
 - iii. by far the most common seasoning
 - iv. Roman salt trade was under state control from the earliest times (see e.g. Livy [1.33.9](#), [2.9.6](#)); the Via Salaria or 'Salt Road' owed its name to its role in salt transportation; the Etruscan city of Veii owed much of its wealth to salt production; and access to salt even provoked [a war between two German tribes](#) at Bad Salzungen in the 1st century CE
 - v. The salt *trade* was valuable ... that's because it was traded in such high volume. But in 204 BCE, when Marcus Livius 'the salt-dealer' imposed his tax on salt, Livy quotes the price of salt at a *sextans*: that is, one sixth of a copper *as*, or one 60th of a silver *denarius* (or in a civilian context, a *sextans* was one 96th of a *denarius*). Polybius, writing in the mid-100s BCE, quotes a foot-soldier's pay as 'two obols' per day, that is to say, one third of a *denarius* (Polybius [6.39.12](#)).

- vi. In other words, a Roman pound of salt (ca. 330 grams) cost one twentieth of a foot-soldier's daily wages.
2. Place names and root words
- a. **Hal-**
 - i. French, from Greek, from hals — more at [salt](#)
 - ii. Halite, Hallstatt
 - b. **Sal**
 - i. Middle English, from Latin — more at [salt](#)
 - ii. Saline, Salzburg
 - c. **Wich**
 - i. dialectal, England: salt pit
 - ii. Middle English witz, from Old English wīch, wīc, from -wīch, -wīc -wich (suffix of place-names, as in Northwich, Middlewich, districts of England associated with salt manufacturing), from wīc dwelling place, village, town (farm)
 - iii. Northwich, Middlewich, Nantwich, Droitwich
 - d. **Soldier** from 'sal dare', meaning to give salt. From the same source we get the word salary, 'salarium'.
 - i. Or is it? From the blog <http://kiwihellenist.blogspot.com/2017/01/salt-and-salary.html> – Folks who propagate this myth don't usually try to cite sources, but when people do go looking for sources, they end up drawn to two pieces of ancient testimony. First is the 1st century CE writer Pliny the Elder:
 - a. *honoribus etiam militiaeque interponitur salariis inde dictis ...*
 - b. (Salt) is also related to magistracies and duty abroad, and that's where we get the word 'salaries' ... -- Pliny [Natural history 31.89](#)
2. And second, testimony about state taxes on salt. For example, the historian Livy reports how the Roman censors imposed a new tax in 204 BCE:
- a. *vectigal etiam novum ex salaria annona statuerunt. sextante sal et Romae et per totam Italiam erat; Romae pretio eodem, pluris in foris et conciliabulis et alio alibi pretio praebendum locaverunt. id vectigal commentum alterum ex censoribus satis credebant ... inde Salinatori Livio inditum cognomen.*
 - b. (The censors) also imposed a new tax on the annual salt production. Salt cost a sixth of an as in Rome and throughout Italy; they set it to be offered at the same price in Rome, but more in town squares and marketplaces, and at other rates in other places. It was widely believed that just one of the two censors devised this tax ... As a result (the censor) Marcus

Livius was given the nickname 'salt-dealer'. -- Livy
[29.37.3](#)

3. Elsewhere Cato the Elder is quoted as talking about *salinatores aeararii*, treasurers of the salt taxes, as a specialized post in the 190s BCE (reported in Servius auctus, commentary on *Aeneid* 4.244). These passages, along with Pliny, are close as we get to a link between salt and money in any extant Roman sources.
- ii. **How much** salt were soldiers paid? The only records Otto has found were noted in silver (Denarii).
 1. This article detailing the development of the Roman soldiers' stipend (*stipendium*) during the Early Republic to compensate for expenses, to augmenting stipends with war booty, to Augustus' reform of how Roman soldiers retired and got paid and also the monetary system, also covers what was deducted before soldiers received any money.
<https://neutralhistory.com/the-pay-of-roman-soldiers/>
 2. Food was one of the deductions from a soldier's pay. That food included seasoning, bread, cheese, and salted meats and fish, maybe olives or other pickled vegetables. So salt was important, but salt would not have been handed over in a salt shaker as a form of pay.
3. Before Rome – Salt trade in Europe, Asia and Africa
 - a. The Hallstatt culture, Proto-Celtic speaking populations of the Late Bronze age and Early Iron Age Europe, followed by the La Tène culture
 - i. UNESCO World Heritage Hallstatt – with a 7000-year history making Salzwelten Hallstatt the oldest salt mine in the world
<https://www.salzwelten.at/en/hallstatt/discover-experience>
 - ii. Salt mine tour under the border of Germany and Austria
<https://www.salzwelten.at/en/salzburg/discover-experience>
 - iii. Archeology (in German)
<https://www.keltenmuseum.at/duernbergforschung/archaeologie/>
 - iv. For more on how Hanseatic League, Holy Roman Empire, and Salzburg got rich from the salt trade in the Middle Ages see
<https://neutralhistory.com/salt-in-the-middle-ages-price-production-trade-use-value/>
 - v. Cheshire was on a Neolithic trade route which crossed the salt fields where Iron-Age Britons probably traded Westmoreland stone axe-heads for salt <https://saltassociation.co.uk/education/salt-history/early-history/>
 - vi. There have been extensive finds of Iron Age briquetage in the Lincolnshire and East Anglia Fenlands and along the Essex coastline. Here the sea water was concentrated in pottery pans 60cm wide, 120cm long, and about 12mm thick.
<https://saltassociation.co.uk/education/salt-history/early-history/>

- vii. At the time of the Roman Conquest, [British salt making](#) had been long established at numerous coastal sites and at the inland brine springs of Cheshire and Worcestershire.
<https://saltassociation.co.uk/education/salt-history/early-history/>
- b. Greeks in pre-Roman Gaul
 - i. Marseilles, Massilia (Latin), Marssalia (Greek), possibly a contraction of two Greek words: “to tie” and “fisherman”
<https://www.divine-id.com/en/marseille-massilia-massalia-dou-vient-ton-nom/>
- c. India
 - i. Salt production along the [Rann of Kutch](#) on the west coast of India for the past 5,000 years
 - ii. east coast salt could be obtained extensively along the coast of [Odisha](#)
- d. China
 - i. About 4,700 years ago, the Chinese Png-tzao-kan-mu, one of the earliest known writings, recorded more than 40 types of salt. It described two methods of extracting and processing salt, similar to methods still in use today <https://saltassociation.co.uk/education/salt-history/early-history/>
- e. Africa, Egypt, West Asia
 - i. Ancient Ethiopia, Egypt, Greece, Mesopotamia, Cyprus, Syria, Israel, Persia, Arabia, and Tibet all used salt as a currency
<https://medium.com/@be.the.ignite/learn-in-a-minute-has-salt-ever-been-used-as-a-currency-4affd8c93464>
 - ii. *The salt trade of ancient West Africa*, by Mark Cartwright, covers the rise and fall of many empires in the region and documents various taxes levied on the salt trade by various rulers.
 - iii. Salt from the Sahara desert was one of the major trade goods of ancient West Africa where very little naturally occurring deposits of the mineral could be found. Transported via camel caravans and by boat along such rivers as the Niger and Senegal, salt found its way to trading centres like Koumbi Saleh, Niani, and [Timbuktu](#), where it was either passed further south or exchanged for other goods such as ivory, hides, [copper](#), iron, and cereals. The most common exchange was salt for [gold](#) dust that came from the mines of southern West Africa. Indeed, salt was such a precious commodity that it was **quite literally worth its weight in gold in some parts of West Africa.**
<https://www.worldhistory.org/article/1342/the-salt-trade-of-ancient-west-africa/>
 - iv. Salt was a highly valued commodity not only because it was unobtainable in the sub-Saharan region but because it was constantly consumed and supply never quite met the total demand. There was also the problem that such a bulky item cost more to transport in significant quantities, which only added to its high price. Consequently, **salt was very often exchanged for gold dust, sometimes even pound for pound in**

remote areas, with merchants specializing in one of the commodities. Indeed, such was the stability of the mineral's value, in some rural areas small pieces of salt were used as a currency in trade transactions and the kings of Ghana kept stockpiles of salt alongside the gold nuggets that filled their impressive royal treasury.

<https://www.worldhistory.org/article/1342/the-salt-trade-of-ancient-west-africa/>

v. An anonymous Arab traveler of the 10th century CE recorded the delicate operation of bulk trading between salt and gold merchants, sometimes called '**the silent trade**' where neither party actually met face to face:

1. Great people of the Sudan lived in Ghana. They had traced a boundary which no one who sets out to them ever crosses. When the merchants reach this boundary, they place their wares and cloth on the ground and then depart, and so the people of the Sudan come bearing gold which they leave beside the merchandise and then depart. The owners of the merchandise then return, and if they were satisfied with what they had found, they take it. If not, they go away again, and the people of the Sudan return and add to the price until the bargain is concluded. (quoted in Spielvogel, 229)

<https://www.worldhistory.org/article/1342/the-salt-trade-of-ancient-west-africa/>

vi. Modern salt trade still uses the traditional camel routes:
Tuareg salt caravans

https://www.bradshawfoundation.com/africa/tuareg_salt_caravans/index.php and Azalai, The Caravan of Peace - Now in High Quality! (Full Documentary)

<https://www.youtube.com/watch?v=OBleoonCtOg>

vii. 2023 News: Sahara salt-miners search for a better future in Niger, <https://www.youtube.com/watch?v=qBclf5haEOK>

4. Roman Salt production

- a. Evaporation ponds along the Mediterranean
- b. Later during more distant campaigns, take over existing production sites or establish new production sites near fortifications
- c. Feed the people and all the soldiers with salt: seasoning, garum sauce, bread, cheese, preserved olives, preserved meat and fish
- d. **Salt in ancient Rome was not worth its weight in gold.** In Egypt, in the year 47 AD one Metron (8lbs/3,65kg) of salt did cost 0,86 sesterces which was the equivalent of 100 figs. 1 Modius (13,8lbs/6,29kg) of wheat flour did cost 20 sesterces. <https://neutralhistory.com/salt-in-antiquity-production-price-use/>
- e. The first of the great Roman roads, the Via Salaria (Salt Road) was built for transporting salt

5. Revenue and Commerce, the Rise and Fall of Empires
 - a. An early mention of salt taxation is found in *Guanzi*, a book written in China c. 300 BCE, and the recommendations of *Guanzi* became the official salt policy of early Chinese Emperors. Salt taxes contributed to the construction of the Great Wall of China.
https://en.wikipedia.org/wiki/History_of_the_salt_tax_in_British_India
 - b. Marco Polo, 13th century Yuan dynasty, described the Changlu salt region in present-day Hebei province:
 - i. Men take a sort of earth which is very saline, and of this they make great mounds. Over these they pour a lot of water so that it trickles through it and becomes briny... Then they collect the water by means of pipes and put it in great vats and iron cauldrons not more than four fingers deep and boil it thoroughly. The salt produced is very pure and fine grained.... [It] is a great source of wealth to the inhabitants and of revenue to the Great Khan https://en.wikipedia.org/wiki/Salt_in_Chinese_history
 - ii. Government salt monopolies continue to impact Chinese empires to modern times
 - c. India
 - i. Salt is a commodity that had been taxed in India ever since the time of the [Mauryas](#) (322 BCE until 185 BCE). Taxes on salt have been prevalent even during the time of [Chandragupta Maurya](#). The *Arthashastra*, which describes the different duties of the people, says that a special officer called *lavananadhyaksa* was appointed to collect the salt tax. Taxes were also imposed on imported salt. However, they accounted for 25 percent of the total value of the salt
https://en.wikipedia.org/wiki/History_of_the_salt_tax_in_British_India
 1. During [Ashoka's](#) rule (ca. 268–232 BCE) the empire briefly controlled the major urban hubs and arteries of the [Indian subcontinent](#) excepting the deep south.
https://en.wikipedia.org/wiki/Maurya_Empire
 - ii. When the British took over the administration of Bengal, India, they gradually they monopolized Odisha salt all over Bengal. To check smuggling and illegal transportation, they sent armies into Odisha, resulting in the conquest of Odisha in 1803
 - d. France
 - i. The gabelle (French pronunciation: [gabɛl]) was a very unpopular French salt tax that was established during the mid-14th century and lasted, with brief lapses and revisions, until 1946. The term gabelle is derived from the Italian gabella (a duty), itself originating from the Arabic word قَبِلَ (qabila, "he received"). <https://en.wikipedia.org/wiki/Gabelle>
 - ii. In 1229, when the [Albigensian Crusades](#) were brought to a close by [Louis IX](#) and his mother ([Blanche of Castile](#)), France gained control of the [Rhône](#) Estuary and nearby Mediterranean coast. This led to the establishment of the first French Mediterranean port city of [Aigues-Mortes](#)

in 1246, literally translated to Dead Waters, and the creation of a vast network of salt-evaporation ponds. These saltworks would fund Louis' [crusading](#) ambitions in the Middle East. A profitable means of generating revenue for France's wars, this royal control over salt and its production stands as the origin of the infamous French salt *gabelle*

<https://en.wikipedia.org/wiki/Gabelle>

- iii. Each province had a *Greniers à sel* (a salt granary) where all salt produced from that region had to be taken in order to be bought (at a fixed price) and sold (at an inflated price)... Because all of the *Pays* had extreme disparities in tax rates and salt consumption, opportunities for [smuggling](#) were rife... Such smugglers were called *faux-sauniers*, from *faux* ("false") and the root *sau-*, referring to salt. They were able to amass large fortunes and seen by French citizens as heroes against an arbitrary and oppressive tax of a common good necessary to life.
<https://en.wikipedia.org/wiki/Gabelle>
- iv. In 1789, following the ascension of the National Assembly, the *gabelle* was voted down and abolished throughout France. In 1790 the National Assembly decided that all persons imprisoned for breaking laws pertaining to the *gabelle* were to be freed from prison and that all charges and convictions were to be permanently dropped.
<https://en.wikipedia.org/wiki/Gabelle>
- v. This freedom would be short lived as Napoleon Bonaparte reinstated the *gabelle* in 1804, this time without major exemptions for regions such as Brittany. The *gabelle* stayed part of France's legislation until abolished in 1946. <https://en.wikipedia.org/wiki/Gabelle>

e. Britain

- i. Salt taxes are referenced in the [Domesday Book](#) but they had died out before patents were given in [Tudor](#) times. Reintroduced in 1641 in the [Commonwealth](#) period there was such outcry that they were withdrawn on the restoration of the monarchy in 1660 and not reinstated till 1693 under [William III](#), with duty set at two shillings a bushel on foreign salt, one shilling on native salt with exemption for [fishery salt](#). In 1696 the tax was doubled and remained in force till abolished in 1825. There were probably 600 full-time officials employed in the collection of the taxes.
https://en.wikipedia.org/wiki/History_of_the_salt_tax_in_British_India
- ii. Salt making continued in post Roman Cheshire, at first through a period of Welsh control and then as part of the Anglo-Saxon Mercia. ... The first documentary account of Anglo-Saxon salt making in Cheshire is found in the Domesday Book of 1086
<https://saltassociation.co.uk/education/salt-history/early-history/>

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