

SALT OF THE EARTH- How and why we need to give salt to all livestock

By Will Winter, DVM

Salt has changed the living population of planet earth more than just about any other precious substance. Life itself is impossible without salt. The Latin word “salary” comes from the era when salt, very rare at the time, was a powerful barter material utilized in trade for slaves and goods. Even the word “salad” was derived from the fact that Roman soldiers used to salt their lettuce and greens before eating. In Matthew 5:13, Jesus told followers that they were so valuable to him that they were “*the salt of the earth*”. Salt has enabled civilization itself to arise, and the mining, shipping and control of salt has created and destroyed many empires. Wars were won or lost based upon access to salt (preservation and transportation of food).

What we call SALT is basically an ionic compound of Sodium and Chloride and we need both of these ions. They help create healthy soil (Sodium is a vital part of the cation exchange capacity), healthy plants and for our livestock. Salt preserves our food as well. Most commercially-available salt also contains varying degrees of trace minerals as well. Salt alkalizes our bodies to the desirable state, whereas being acidic typically brings disease and degeneration. Babies with adequate salt intake have higher I.Q.s. Studies show more Type 2 diabetes, stroke, high blood pressure and cardiac problems when there is a low salt intake. We digest food via hydrochloric acid which is made from the chloride ion. Uh, yeah, the need for plenty of good salt is kind of the opposite of what your doctor has been telling you, right? Just be sure to use good, natural seasalt, not the commercial white stuff. Use the Morton’s to de-ice the sidewalk.

All the water on this planet, which incidentally covers about 71% of the entire surface, was once salt-free, fresh water. Today, only

3.5% of all the earth's water is fresh (not salty) and about 69% of that is locked up as ice (this is rapidly changing by the way). The oceans, 96% of all water, have been enriched over the millennia and made salty and mineral-rich via the topsoil that washes into the ocean. *That is where our vital soil minerals went!* At this time, and in particular, thanks to irresponsible, idiotic and unsustainable farming practices, over 200 million tons of topsoil continue to be lost to the oceans *every year!* It is said that the equivalent of a 120 acre farm floats down the Mississippi River every 24 hours! Alas, it's not called the "Big Muddy" for nothing.

THERE CAN BE NO LIFE WITHOUT SALT

Livestock that are deprived or deficient in salt become deranged, weak and will die. Bison and other large herbivores migrated thousands of miles, orientating their epic journeys based both on better grazing, but equally important, the location of exposed salt and mineral licks. These licks then became prime hunting grounds enabling nomadic and indigenous peoples to thrive and establish villages around them. When European immigrants came to this continent it was easy to remove the people and take over the wildlife harvest at the salt licks, and eventually towns and cities sprung up around the licks. Likewise, extremely huge underground deposits of salt have been discovered. Entire industries, even cities, evolved to mine, purify and ship salt. Salzburg, Austria literally translates into "the city of salt" which came from nearby mines. The port of Liverpool grew from a backwater nothing to one of the largest ports in the world based on the proximity to the salt mines in nearby Cheshire. In fact, any British city or town whose name ends in "-wich", like Sandwich, or Norwich means it was originally founded as a salt mine village.

Salt today is either sourced from evaporation of sea water or via mining the underground, crystallized mineral known as rock salt (or halite). Underground deposits can be a thousand or more feet thick and can be found in the US and Canada under the

Appalachian basin from New York to Ontario, and under much of the Michigan basin. There are also large deposits under Kansas, Utah, Texas, New Mexico, Ohio and Nova Scotia.

WHERE LIVESTOCK SALT COMES FROM

Most livestock salt is derived from the underground mines, primarily under Utah and Kansas. These ancient seabeds were evaporated as the continents rose and the most common ones are estimated to be around 240 million years old. At one time here, where I am sitting in Kansas, was covered by an ocean a mile deep. As it dried and crystallized, the surrounding geology determined the relative composition of the various trace minerals. The pink salts such as Redmond's and Himalayan salts have a tiny bit more iron in them leading to the rusty color whereas the grey salts, such as what we refer to as Kansas Grey have less. According to Dr Rich Olree, the Celtic salt varieties are slightly higher in traces of bromine than any other salt so he recommends that we eat other seasalt options such as Baja Gold from SeaAgri. We recommend that people eat seasalt rather than refined white salt, as the commercial white salts have been "purified", that is, mineral-stripped, then adulterated with aluminum to prevent clumping. Excessive aluminum intake may be associated with degenerative diseases such as dementia and Alzheimers. The tiny speck of iodine that is added to commercial human salt is not enough achieve much more than to the prevention of goiter, but helps to meet the RDA guidelines of the federal government. Iodine deficiencies and the subsequent health problems are rampant for the average American. Whereas the RDA is a merely 150 micrograms daily, Jerry Brunetti used to suggest that we mirror the sea-vegetable and ocean fish diet of the virtually cancer-free Japanese people, who tend to take in a whopping 14 milligrams of iodine a day. Much of the Midwest is severely iodine-deficient, for example, my mother, a farm woman who grew up eating food grown on the farm, developed an orange-sized goiter when I was a child. Who knew?

A few years ago, Jerry Brunetti and I sent several one pound samples of all the top salt products except SeaAgri's SEA-90 to Acme Analytical Labs for a full analysis of the various mineral contents. The results were quite interesting. What we discovered was that they are all about 98% sodium chloride with the remainder consisting of a vast rainbow of 70-80 minerals, but only tiny specks of it, either ppm or ppb. So much for the corporate claims that they are selling a "Mineral Salt"! Sorry, it's just salt. These traces, of course, includes tiny amounts (some times even parts per billion) of some deadly toxic (in large quantities), and even radioactive minerals, including lead, arsenic, mercury, radium, uranium, cesium and many others.

EVAPORATED SEASALT

Recently, I have been intrigued by the robust claims of the product SEA-90 which has been touted for just about every agricultural use. This is a modern evaporated salt which is dried and harvested very scientifically in the Sea of Cortez, just off of the Baja Peninsula of Mexico. This salt was developed primarily by the late Dr Maynard Murray, who's scientific research is now carried on by Robert Cain of SeaAgri. Whereas seawater is 3.5% solids and the ratios are identical to those needed to match the blood of living beings. When it is dried, the minerals and trace elements are much more prevalent than ancient salt, ranging up to 28% (not sodium chloride). There is more to this story, including the many ways this type of true mineral salt can be applied to pastures to improve quality and quantity of forages. Feed it to your livestock and you'll be pleased with the results.

TOP TEN GUIDELINES

- 1) All livestock need to have a good source of daily seasalt. For the most part, *give it free-choice*, whereas pigs, dairy animals and poultry can have seasalt mixed directly into the ration.

Animals know better than scientists exactly how much salt they need.

- 2) Except for horses, who, unlike grass-fed cattle, don't have anything better to do than lick something, avoid the use formed blocks of salt. Grazers don't have time to lick the block, plus the limited-access can prevent some animals from getting enough. Equally bad, I have never found a high quality salt block. In fact, the cheap (usually Chinese-sourced) minerals found in the red or brown blocks can actually "fool the body" into thinking it has taken in vital minerals only to discover they are not very absorbable.
- 3) I know this comes as a shock, but...in almost every circumstance, never mix salt with the vitamin/mineral mix. For one, the salt will destroy valuable ingredients, and secondly, the ratios animals need will vary from day to day, season to season, condition to condition. Pregnant or lactating animals may need extra minerals but the salt would inhibit consumption. On hot, windy or dry days, they may need more salt but not necessarily more minerals.
- 4) Avoid vitamin-mineral mixes with a high content of salt. Anything over about 5-8% is too much. Sadly, salt is used both as a cheap filler, as well as a flavor stimulant. Look for mineral products that have a goodly amount of kelp instead.
- 5) Seek out the best seasalt you can find, my favorites include SeaAgri's SEA-90, Kansas Grey and Redmonds, and some of the local salts, if they are natural. This means that it's best to avoid the purified (and mineral-stripped) white salts.
- 6) Use a portable mineral wagon or covered hopper for providing free-choice salt. Keep it dry and away from other products. Salt will corrode metal hoppers quickly.

- 7) Use the location of the portable salt/mineral hoppers or wagon to control grazing and traffic patterns. Make it fairly convenient but aim for weed patches or neglected areas.
- 8) If your forages or water are known to be high in iron, it may be best to use a version of the grey salt.
- 9) If there are periods of heavy fly or parasite pressure, add a product like Sister of Salt to the regular salt. An 11# bag will doctor 100# of salt. It is 80% sulfur (repellent to flies and biting insects), and over 9000 ppm of good iodine. This is a band-aid compared to such issues as rotation, manure management, dung beetles, or fly traps, but it will definitely work.
- 10) Buy your family some of the best seasalt you can find and don't be afraid to enjoy it as much as you want!

IN SUMMARY

The best seasalts in the world will only cost you a penny or two a day per head, maybe even less, so don't be stingy. As with vitamin-mineral mixes (which we will discuss in depth in later issues), this is a product in which it doesn't cost any more to fly First Class! Why settle for less?

WILL WINTER is a retired veterinarian, a holistic herd health consultant and livestock nutritionist who hangs his hat in Minnesota. He is also a traveling lecturer and teacher focusing on sustainable livestock production and traditional nutrition. He provides consultations, workshops, lectures and access to natural livestock supplies to farmers and ranchers.

www.grassfarmersupply.com

willwinterdvm@gmail.com