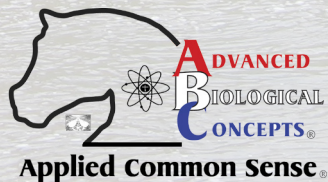




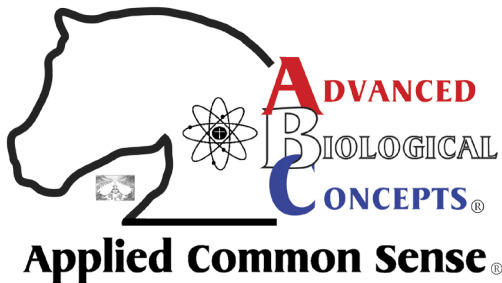
Gordy Jordahl, Water Physiologist



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Gordy Jordahl

Water Physiologist



Biography

Gordy has over 35 years experience in the field of plant pathology and water physiology. He attended the Salk Institute and worked side by side with Dr. Peter Salk (a scientist and son of the late Jonas Salk, developer of the Polio vaccine), instituting a market for plant growth regulators on cover and row crops in the Midwestern states.

In the Mid 1980's, he began consulting for numerous poultry operations in the south central region of the U.S., reading and recommending solutions for health based on water analysis. Gordy formulated numerous water soluble products for all classes of livestock in the late eighties to early nineties, based on water analysis. He consulted for several fluid fertilizer companies for many years making recommendations based on water soluble soil analysis through prescription fertility for crops. He developed numerous products compatible with organo-phosphate type pesticides to enhance a safety net for a healthy environment, crops and livestock.

Gordy worked numerous years in the field of soil science with the late Dr. Joe Waters, a major contributor to *Western Fertilizer Handbook*, used at many major University Agronomy departments. From the mid 1990's to the present day, he has worked with **Helfter Feeds Inc.®** and **Advanced Biological Concepts®**, contributing to the field of water physiology based on livestock suitability and mineral formulations to enhance health and harmony in the organic livestock industry.

Practical Solutions in Raising Livestock

Gordy Jordahl

Water is necessary to the life and shape of every cell. It carries nutrients to the cells and moves waste away. It is necessary for reactions of digestion and metabolism. Water constitutes 70-75% of the body. Water is the key to sustaining life. Consider that an animal's body is made up of approximately 70-75% water, and the larger remaining portions are minerals, which are the core of the body governed by positive and negative ions. The blood consists of 80% water. When water is not energized in the body with the proper balance of minerals, the electrical field cannot transfer energy to the cells.

Certain combinations of elements in drinking water produce predictable stresses that later develop into nutritional deficiencies. These nutritional deficiencies are then diagnosed as diseases. To further direct a solution to animal health problems, we need to understand the functions of the body and what role water plays in these functions.

1. Mineral makeup determines water intake and water retention. Most water supplies contain bicarbonates. High bicarbonates can cause havoc on mineral absorption, which affects cellular metabolism, causing dehydration and reduced feed consumption.

2. Water supplies have become contaminated by water-borne bacteria, fungi, pesticides, nitrates, lead, cysts, spores, heavy metals, chlorine, and hundreds of other compounds. These components are capable of depleting oxygen from the blood. The end results are premature cell death and declining animal health.

3. The pH of water reflects the availability of needed minerals, and high pH promotes reproduction of bacterial pathogens. High protein feeds (such as soybean meal, fishmeal, meat & bone meal), dical phosphate, and limestone, along with higher than neutral (7) pH water will create acid-binding capacities, allowing pathogens more opportunity to colonize the digestive tract. Since waterborne-disease-causing organisms prefer higher pH, they inflame the intestinal wall so fewer nutrients are absorbed, causing a deficiency, and water is drawn back into the intestines. Feces become liquid as diarrhea, and animals become dehydrated.

4. Foreign invaders such as bacteria, viruses and toxins all carry a different energy or frequency than their hosts. The immune system consists of billions of cells, targeting pathogenic organisms that carry different energies or frequencies. Through cellular communication it can identify, tag, destroy and rid the body of these organisms and substances. However, mineral balance and the electrical field of water need to be in harmony with one another in order for this to occur. Quality water is required for this phenomenon.

Producers are frustrated with having to live with herd health issues, because their only option is treating the symptom - not solving the problem. After literally thousands of water analyses throughout the United States, a pattern became clear.

Advanced Biological Concepts® has been dedicated for over 50 years to providing practical solutions for livestock health issues.

Visit www.abceplus.biz or call 800-373-5971 for more information.



Returning Economics to Swine, Poultry and Dairy Operations

Gordy Jordahl

Success at early life stages is hampered by underdeveloped digestive systems, which adversely affects secretion of enzymes and production of hydrochloric acid needed to break down proteins.

The majority of components in water and feedstuffs consist of acid-buffering components, which form barriers to digestive acids and have depressive effects on the progress of digestion. **Bottom Line:** Time loss, feed loss, weight loss and possible death put a damper on the possible economic returns when raising livestock.

Success is also hampered by ammonia production from organic waste. According to university data, ammonia levels at 20 ppm and greater can reduce daily average gain by 12%. **Note:** An ammonia level has to be at least 10 ppm before it can be detected by smell.

Not only does ammonia production at the surface level reduce daily gains, but it also creates susceptibility to denitrification from organic waste. Because ammonia is pH and moisture-related, it displays higher oxides of nitrates that plants cannot utilize effectively. This is also brought about due to high bicarbonates found in water supplies that are eventually dispersed into organic waste.

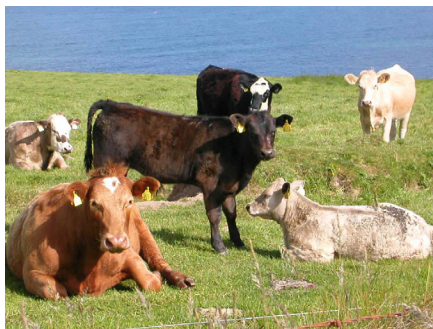
Understanding the nitrogen cycle can paint a clearer picture of how and why to practice a sound waste management program. Relate back to the importance of breaking down proteins for digestion.

If there remain undigested proteins, which are compounds of fatty acids, these fatty acids then become volatile in organic waste and are a major contributor to the odor threshold problems that larger operations face today.

Nitrogen is lost from organic waste by reactions that convert nitrates to gaseous compounds of nitrogen, a process of denitrification. As these gases are lost there is then a loss of crop producing nitrogen in soils where wastes are being applied. Also under anaerobic conditions in waste these denitrifying bacteria remove the oxygen from chemical compounds to meet their own needs. This adds to sludge buildup at the bottoms of waste storage areas.

What Can Be Done?

Fortunately, there is a solution to target these problems that hamper livestock producers from reaping the economic benefits of raising livestock at all life stages.



Water: Lowering pH, eliminating bicarbonates, reducing surface tension and increasing electrical frequencies will assist the gut microflora in the breakdown of protein, and will lower the oxide levels of nitrates in waste materials, so that plants can use the nitrogen effectively.

Feedstuffs: Reducing acid-binding capacities of feed components to assist secretion of enzymes in the digestive tract allows natural digestive acids to break down proteins and retain the optimal gut microflora required to fight off undesirable bacteria.

Organic Waste: Reducing pH of organic waste nitrifies bacteria. Nitrification will increase nitrogen for crop production. These bacteria are very favorable in pH levels of 6.5. Most of the nitrogen tied up in soils is unavailable because it is tied up in organic matter of proteins and allied compounds and needs to be broken down into amino acids. The soil organisms acquire their energy from this digestion, and they utilize the amino nitrogen to maintain their cell structure. When ammoniac nitrogen is formed, it converts amino compounds into ammonia (NH₃) compounds, before it can be converted to plant nutrients.

The key to sound waste management is to eliminate sludge buildup and encapsulate ammonia compounds, thus increasing digestion, utilization and absorption (**D.U.A.TM**).

Visit **www.abcplusplus.biz** or call 800-373-5971 for more information.

Chlorination Kills Germs, So It's Good For You...Right? Wrong! Read on to find out why.

Gordy Jordahl

Chlorine is an oxidizer added to most municipal water supplies, creating some hidden dangers most people do not know about.

Chlorine is a disinfectant that hardens arteries and destroys proteins in the body. Chloroform is a by-product of chlorination and causes excessive free radical formation, accelerating the process of aging. It also causes normal cells to mutate, cholesterol to oxidize and is a known carcinogen.

Another by-product of chlorination is Dichloroacetic Acid, which causes liver cancer in lab animals. *US News and World Report* stated that chlorinated acid is a proven cause of bladder and rectal cancer, and research conducted at Harvard University found that chlorinated water is the direct cause of 9% of all bladder cancers and 15% of all rectal cancers in the US.

Chlorinated water will react with organic compounds such as mercury, lead, spores, cysts and other sediments to produce chemicals such as chloroforms and carbon tetrachlorides that are potential carcinogens. The increased risk does not come from chlorine itself, but from the action of these factors in ground water supplies because chlorine is an oxidizer. Chlorine causes a 4-5% decline in body water (dehydration), which results in a 20-30% decline in mineral metabolism. Chlorine is also an iodine blocker, which affects thyroid function.

When chlorine reacts with organic matter already present in water, humus and organic material from plant decay, toxic by-products such as chloroform are formed. Chloroform was once used as an anesthetic; however, the FDA banned it in 1976 when it was discovered to cause cancer.

Even if there is no noticeable taste or smell, the chlorine is present. Chlorinated water reduces digestive bacteria in the gastro-intestinal tract, which decreases rate of gain and feed efficiency. I believe the evidence is clear and the advice is simple: don't drink or force your animals to drink chlorinated water.

When showering in warm chlorinated water for 10 minutes, you absorb chloroform, which penetrates all seven layers of your skin, destroying proteins of the skin. Chlorine is absorbed into the blood 6x greater when taking a shower than by drinking chlorinated water. It is not an accident that chlorine labels carry the cross and bones poison symbol.

...**THINK BEFORE YOU DRINK!**

Immune Support

Gordy Jordahl

What role does quality drinking water, air and balanced mineral intake play in immune support? As far as research goes, immune support is one of the last frontiers in animal health.

Consider that the body is made up of trillions of cells. The cells are made up of atoms, and atoms are made up of electrical impulses spinning around each other in groups called protons, neutrons and electrons. The speed at which they spin around each other establishes an electrical frequency.

The cells, and all of the body fluids surrounding the cells, carry these frequencies, creating a perfect magnetic force of energy in and between the cells called polarity, which is required to retain metabolism.

When foreign invaders, such as bacteria, viruses or toxins, enter the body, they have different electrical frequencies than healthy cells. These different frequencies allow the immune system to identify the invaders.

Unfortunately, due to environmental stresses like poor water and air quality, abnormal mineral balance disrupts the frequency of the cell, interfering with cellular communication.

Cells regulate temperature and metabolism. These rely on mineral absorption to retain polarization. The cells communicate their need for excretion of waste and toxins, damage repair, and need for specialized defense to protect against outside invaders that come from drinking water, air, and feeds.

The immune system is a miracle of creation. Quality nutrition through water, air and minerals is required for a healthy immune system.



The Process for Maintaining Hydration

Gordy Jordahl

Rations with balanced minerals are required to maintain water retention. Water carries energy created when mineral salts are split into positive and negative ions, forming a lattice structure called clusters. Being energized, these clusters are free to pass over and through all fluids and tissues in the body, retaining equilibrium and supplying the electrical energy needed for metabolism to exist.

Cells are the receptors of this energized cluster form. There are three main life support systems in the body that make up the 70% water retained in the body: 5% in blood plasma, 15% in extra cellular fluids surrounding the cell, and 50% in the inner cell.

When this objective is reached, water retention is acquired to establish optimal digestion for development, growth and overall health. However, when numerous ions are present in the form of high total dissolved salts (TDS), the mineral salts no longer stay split in lattice form, but combine together, and the mobility of a single ion decreases. Being immobilized, the reserve minerals in the body are no longer able to replace lost energy within cell tissue to balance equilibrium in and between cells for metabolism. Also, when combined together, these ions form a crystalline structure, increasing the surface tension in water.

The key is keeping the ions of minerals such as potassium, sodium, calcium and magnesium split and balanced in a lattice form. They are then not only energized but will manifest organized structured water molecules in a cluster.

This is key when choosing an electrolyte that will display balanced charges of ions. They then retain charge like a battery in an automobile, and the animal will retain water for most all biological functions to take place in the body.

The cells expend a great deal of energy constantly pumping their contents to keep most of the potassium inside the cell and sodium outside in the cellular fluids. Sodium and potassium ions are electrically charged particles. Their separation inside and out causes the cell membrane to become polarized. The sodium solution outside the cell is positively charged relative to the more negatively charged potassium inside the cell. This electrical polarization helps electrically charged particles of nutrients to flow into the cell and waste particles to be eliminated into surrounding fluid, to eventually to find their way into the bloodstream and be eliminated from the body.

Sodium saturation is most commonly the cause of potassium shortage in the cell, which causes an imbalance of equilibrium or metabolism. When sodium content in water is high, and combined with high sodium in the feeds, this causes a potassium shortage within the cell. Water softening with sodium chloride leads to the same problems.

Note: Metabolism is the continuous process by which living cells or tissues undergo chemical changes such as this equilibrium in and between cells to constantly build up living matter in the system to supply energy.

If potassium is not concentrated enough inside the cell, the sodium/potassium pump is hard pressed to keep out enough sodium, and this results in dehydration. With high sodium adsorption, cells become waterlogged possibly to the point of bursting, causing a drop in blood pressure.

Without the **sodium/potassium** pump common to all cells in the body, no other biochemical action can take place. When a cell dies due to this imbalance, sodium slowly seeps in and potassium diffuses out.

The electrical polarization of the cell membrane diminishes to zero and the flow of nutrient particles in and waste out ceases.

This all adds up to the fact that water retention within the body plays a key role in health.

To support the body's ability to maintain hydration, cations, anions, **IONS™** and **DUA W.T.**, from **Advanced Biological Concepts®**, can be used to supply the needed nutrients.

Gordy Jordahl

There is not one part of the body's system that can function in the absence of electrically alive water. The entire electrical function of every cellular process depends on the electrical frequencies of every molecule. This frequency increases or decreases depending on hydration at the cellular level.

The public is misled that any water will increase hydration at the cellular level within minutes. This information only paints a picture that water is water because it is wet. Water has to contain energy to manifest functions needed at the cellular level.

Chlorinated and filtered water cannot adequately hydrate cells. These processes bind water molecules so tightly together it increases the surface tension much greater than the surface of the body fluids that surround each and every cell. The binding of water molecules results in electrically damaged water. This makes it difficult to electrically interface with body fluids.

This forces the body to immediately excrete the water. Hard water deposits, or water with high total dissolved salts (TDS), does not correlate with body fluids for cellular hydration, since these affect surface tension, and again the body dumps this water more readily.

PH is relative to mineral absorption affecting electrical conductivity of body fluids. Conductivity is relative to the overall bonded ions of calcium, magnesium, potassium and sodium, these being the major constituents of TDS.

If conductivity is too high, water is dumped more readily. If conductivity is too low, body fluids are challenged to relate energy to cells for communication.

High sodium adsorption ratio (SAR) and bicarbonates (HC03) also affect hydration. Bicarbonates increase sodium absorption, carrying water with them to flood the cell and displace the potassium ion. This process wreaks havoc with cellular metabolism.

Note: The body has to separate the electrical matrix of the H2O molecule from numerous components found in different water supplies before the water can become available for hydration. Otherwise, electrical conductivity of the body fluids become damaged, disrupting communication at the cellular level, resulting in electrical malfunction. The only way the body can function at the cellular level is through conductivity of fluids in and around the cells.

Lowering surface tension by adjusting pH and sequestering major constituents of water from bonding (normally with phosphorous salts, pH adjuster and a balanced electrolyte) becomes a major role in cellular hydration. The water then becomes cell food. The body fluids can then assist signals to the cells to retain water for hydration. This in turn will increase metabolism and relay the right signals for immune response of natural antibodies.

Cations, anions, **IONSTTM** and **DUA W.T.**, from **Advanced Biological Concepts®**, can be used to supply the body with the needed nutrients.

Natural Alternative to Porcine Circovirus Type 2

Gordy Jordahl

Circovirus suggests a mutation of the causative agent from post weaning “multi-systemic-syndrome” first identified in the ‘90s. It has decimated swine farms in large geographical areas of the U.S. This complex virus attacks the intestinal tract, which is responsible for over 70% of the immune response.

Target Factors from **Advanced Biological Concepts®** contains protein messenger technology which has triggered great interest in the livestock industry. **Target Factors** serves as an immune safety net for all classes of livestock. This technology blankets all stages in production. As an example in swine, **Target Factors** is fed 3-5 consecutive days prior to breeding, pre-farrowing, early post weaning and early grower stage to serve as an immune safety net.

Target Factors activates an enormous immune response within the immune system throughout all life stages. The protein messengers are communication, memory and educational molecules. Their major role is educating, activating and mobilizing the natural killer cells that invoke an immediate immune response.

There is immune awareness to antigens (virus, toxins, bacteria) during pregnancy. **Target Factors** is not immune compromising, and will communicate and activate the specific antibodies needed to protect the fetus until birth with a safety net against foreign substances.

At birth, a newborn begins producing antibodies. **Target Factors** is fed again for a few days at different growth stages continuing to influence immune response. **Target Factors** activates and mobilizes T-cells to search memory files and find the blueprint of the foreign substance responsible for the disease.

Before the immune system can respond, it must be able to recognize and not compromise the foreign substance responsible for disharmony in the body. **Target Factors** supplies a protective safety net and preventative benefits.

Learn more at www.abcplusplus.biz or call 800-373-5971.



Synthetic Medications: “Fact or Fiction” Curing Animal Health Complications? You Be the Judge

Gordy Jordahl

It is a fact that antibiotics only kill bacteria; they don't kill viruses. Unfortunately, antibiotics are usually prescribed for most health complications faced by producers, even though the infection may be viral in nature and not bacterial. The other major problem is that in over 90% of the time, the antibiotic recommended is not effective against the strains of bacteria present.

All antibiotics kill friendly bacteria (in the colon and other places), which automatically leads to candida (yeast overgrowth). Antibiotics suppress the immune system, making animals more susceptible to other infections. They create superbugs that are resistant to antibiotics and stronger than any other infectious type of disease.

When antibiotics destroy good and bad bacteria the cell wall ruptures, and bits of bacteria enter blood and tissues. An animal's body does not like these bacterial bits and reacts by producing inflammation and auto-immune reactions.

Many autoimmune diseases originate in the digestive system. Antibiotics create an imbalance by killing the good bacteria, which help regulate nearly every system in the body. Good bacteria are part of the body's natural defense system, helping to break down protein and absorb nutrients. The destruction of good bacteria by antibiotics impairs digestion and adsorption of nutrients - which causes nutritional deficiencies. Good bacteria also synthesize B vitamins necessary for health of the digestive system.

Without good bacteria dominating the intestinal environment, yeast will convert into its fungal form. This fungal form has the ability to leave the digestive tract and spread throughout the body. Once this happens, it becomes a source of toxicity throughout the body until it is eliminated. The natural balance can only then be restored.

Each fungal cell will secrete toxins that destroy other bacteria. This perpetuates the cycle of imbalance and toxicity. These toxins are another cause of inflammation in the body. The liver, large intestine, lungs and kidneys eventually become overwhelmed with the toxic burden and cease to function properly. If this persists long enough, the animal's inflamed, nutrient-starved body will start to waste away.

Using antibiotics to treat livestock complications creates resistant bacterial strains in the body. Antibodies wipe out *weak* strains while *stronger* strains persist. These surviving bacteria will then pass on their survival secrets to other strains of bacteria in the body. Each subsequent antibiotic only adds to the knowledge base of these man-made superbugs.

The only way to eliminate them is to restore the natural balance of good bacterial flora.

Are these synthetic medications the answer to addressing livestock complications? You be the judge.

Viral Infections in Livestock: Mode of Action

Gordy Jordahl

A virus is a small, infectious organism, much smaller than a fungus or bacterium, that needs a living cell manifesting a low vibratory rate in order to reproduce. It attaches to the cell and once inside, the virus releases its DNA or RNA, which contains the information needed to create new virus particles. It then takes control of the cell's metabolism. The components of the virus are then manufactured inside the cell and must be properly assembled for the virus to be released and remain infectious. Some viruses kill the cells they infect, and others alter the cell function, causing the cell to lose control over normal cell division.

Viruses incorporate a part of all of their genetic information into the host cell DNA and remain silent until the cell is disturbed or challenged in any way. That permits the virus to emerge again. Most viruses have preferred hosts, and some, such as the influenza virus, infect a variety of animals. Some strains of influenza have adapted in a way that allows them to infect some species of animals more efficiently than others. An animal's body has a number of specific defenses against viruses.

Infected cells make interferons, which is a family of glycoproteins that can make non-infected cells more resistant to infections. When a virus enters the body, various types of white blood cells (such as lymphocytes) are able to attack and destroy the infected cells. When exposed to a viral attack, T-lymphocytes (T-Cells) increase in numbers and mature into helper cells that aid antibody-producing B-lymphocytes (killer cells), which can attack cells infected by a specific virus.

The T-lymphocytes produce chemicals called cytokines that speed the developing process. The cytokines from helper cells help B-lymphocytes and their derivatives (plasma cells) to produce more antibodies that target complex viruses, and make them non-infectious, before they can affect another cell.

Giving a specific vaccine to resemble a specific virus without causing a disease can produce immunity. In response to the vaccine, the body increases the number of T and B-lymphocytes that are able to recognize a specific virus. However, a virus mutates to avoid antibodies.

Immediate protection against complex viral infections can be achieved by infusion of immunoglobulins produced by another animal who has been exposed to the same virus.

Drugs that combat a specific viral infection are generally more difficult to design for their targeted organisms and are generally more toxic. They are designed for a specific organism; however, viruses are now becoming more complex. More antibody classes of immunoglobulins within the immune system need a broader spectrum of response and more immediate activation manifesting a safety net against viruses mutated from a specific virus attached to a cell. **Target Factors**, from **Advanced Biological Concepts®**, aids as a safety net to support immediate immune response.

A Possible Missing Link to Restore Electromagnetic Balance to Produce Life in Soils

Gordy Jordahl

Decades ago, before the advent of modern agriculture, everything we planted grew and contained the balanced electrical matrix (framework) that was created.

However, modern day agriculture brought change and to change any component of this matrix of soils would cause disharmony in plants and animals. Disharmony transfers disharmony to everything it comes in contact with, from the soil media to the roots and aerial portions of plants for food.

Dr. William A. Albrecht, former chairman of the Dept. of Soils at the University of Missouri, warned that growing plants and animals on a soil with insufficient fertility due to lack of organic material, major elements and trace minerals containing an imbalanced matrix, is responsible for poor crops, and this in turn forms negative pathological conditions in animals.

Linus Pauling, the only person to ever win two unshared Noble Prizes, also stated, "You can trace every disease and every infection to a mineral deficiency from unequally yoked energy fields."

Energies of minerals have been scoured from agricultural sites in the past several decades as assuredly as if they have been vacuumed out of a family room carpet.

When the pioneer farmer first began plowing the plains in the United States, there were more than six feet of topsoil, containing an abundance of minerals. Today there is much less, and most of the base is gone.

There are no silver bullets pertaining to numerous products or given nitrogen sources, mineral combos, microbial products or growth regulating hormones that can stand by themselves to address all the needed combinations to help balance the electrical matrix in soils.

However there is a tool called **Organi-Zyme**, from Advanced Biological Concepts®, to help balance the electromagnetic imbalance. **Organi-Zyme** addresses the cause and not the symptom of plant disease, increasing the quality of foods as it promotes equal concentrations of energy sources and fortifies the natural balance of minerals. It also increases sugar levels beneficial for plant insect resistance and neutralizes high salt indexes that retard beneficial soil organisms. **Organi-Zyme** reduces oxidation of stalks, mulch, and organic matter, which can then be absorbed into the soil and converted to sugar. It builds soil humus to reclaim toxic soils to stimulate and nourish soil organisms. It encourages the action of micro-flora and earthworms to breakup compacted sub-areas for more extensive root development and increased soil water retention.

Organi-Zyme enhances naturally occurring and applied commercial nutrients to the optimum. Contact us at 800-373-5971 to learn more about this product.

Should Water Softening Be Used for Dairy Drinking Water?

Gordy Jordahl

Should water softening be used to fix most physical qualities of water for dairy cows?

Water softening relates to the physical nature of water, however it can relate to metabolic issues in cows. Why? Normally, sodium chloride, or salt, is used in softening water. It can have an effect on metabolism between the sodium/potassium pump within the body that carries nutrients (electrically charged particles) into the cell and waste particles out of the cell.

The cells expend a great deal of energy constantly pumping their contents to keep most of the potassium inside the cell and sodium outside in the intercellular fluids.

Sodium and potassium ions are the electrically charged particles. Their separation, inside and out, causes the cell membrane to become polarized. The sodium solution outside the cell is positively charged relative to the more negatively charged potassium inside the cell. This electrical polarization helps electrically charged particles of nutrients to flow into the cell and waste particles to be eliminated into the surrounding fluid, eventually to find their way into the bloodstream and be eliminated from the body.

Sodium saturation is the primary cause of potassium shortage in the cell, and this causes an imbalance of equilibrium or metabolism. When sodium content in water is somewhat higher than caution levels from water analysis or combinations of salt in feed with sodium from softening can all add up to increased sodium adsorption levels causing potassium shortage inside the living cell.

Note: Metabolism is the continuous process by which living cells or tissues undergo chemical changes, such as this equilibrium in the between cells, to constantly build up living matter in the system to supply energy.

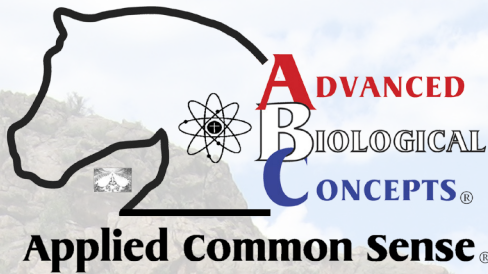
If potassium is not concentrated enough inside the cell, the sodium/potassium pump is hard-pressed to keep out enough sodium, resulting in dehydration. With higher sodium adsorption comes too much water, and the cell becomes waterlogged, possibly to the point of bursting, causing a drop in blood pressure.

Without the sodium/potassium pump, common to all cells in a cow's body, no other biochemical action can take place.

When a cell dies due to this imbalance, sodium slowly seeps in and potassium diffuses out. The electrical polarization of the cell membrane diminishes to zero, and the flow of nutrient particles in and waste out ceases. You be the judge.

NOTES:

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Gordy Jordahl **Water Physiologist**

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