

SARFORD'S NEWS

Volume 9, Issue 1
September 1, 2011

SARTEC CORPORATION INTRODUCES **SULFUR GUARD™** PRODUCTS TO CATTLE FEEDERS

SarTec has introduced a new line of patent pending products for the cattle industry. These new products are termed Sulfur Guard™ products. SarTec products with Sulfur Guard™ contain all of the original product ingredients, plus additional ingredients which form insoluble complexes with sulfide ions in the rumen. SarTec's products with Sulfur Guard™ (denoted by SG in the name) tie up sulfur so it can no longer accumulate in the rumen gas bubble as depicted below. SarTec currently offers SarTemp® SG and SarStart® LSC SG products and is finishing up field testing on SarStart® DSC SG, which will be available soon.

Inorganic sulfur toxicity has always been a problem in the feedlot industry. Sulfur can be present in feed ingredients and in water. Today,

SarTec's SG Products

- SarTemp® SG
- SarStart® LSC SG
- SarStart® DSC SG*
- *coming soon

varying amounts of sulfur on a day to day basis) and more marginal water being used, it is even more important to try and mitigate the effects of too much sulfur being fed to cattle.

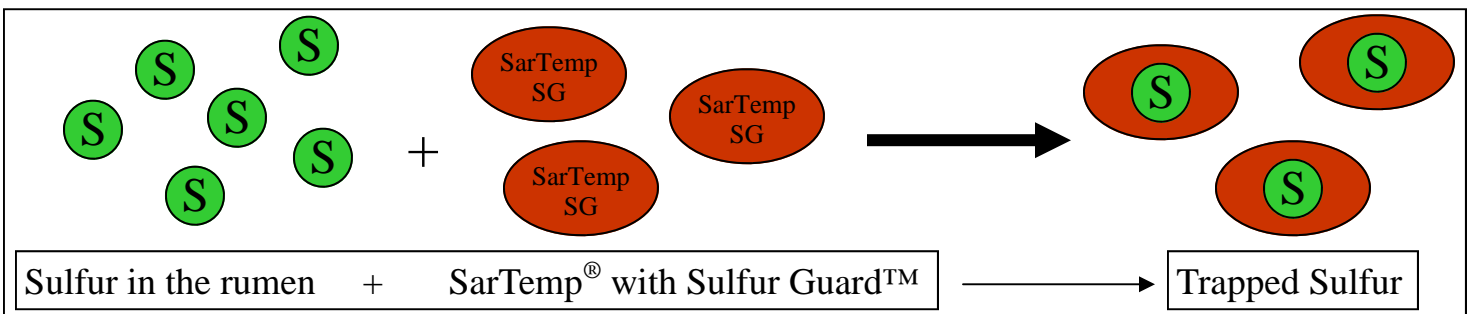
Sulfur is a required nutrient for beef cattle; however, too much sulfur in the diet can quickly become toxic. One of the first signs of cattle sulfur toxicity is reduced feed intake, which quickly translates into reduced gains and efficiency. This initial, reduced intake may go unnoticed, but it will cost the feedyard as even a slight decrease in feed intake can adversely affect the bottom line.

with the As the amount of sulfur ingested by increased the animal increases, the effects on feeding of feed intake and performance will become more apparent. If one continues g r a i n s to increase the amount of sulfur in the (that may contain health effects such as restlessness, diarrhea, muscle twitching, dyspnea, inactivity or even death (Coghlin, 1944).

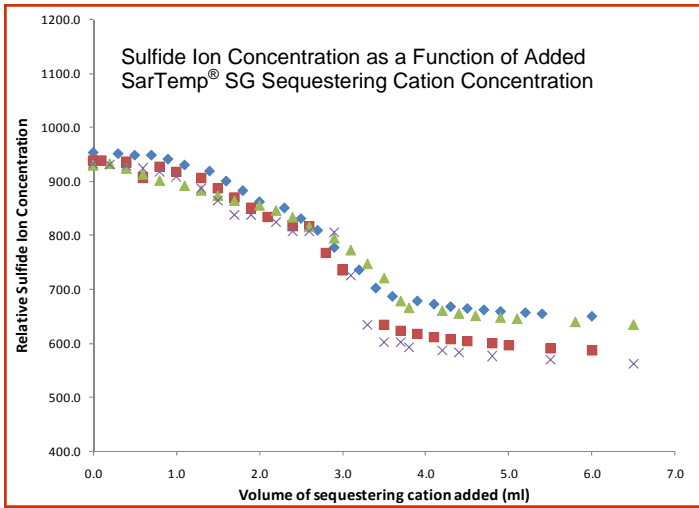
Additionally, even slightly high levels of sulfur can interfere with copper (and other trace mineral) absorption. Signs of copper deficiency include anemia and reduced growth (NRC, 2000).

These sulfur related problems are exacerbated by confinement and/or hot weather.

Sulfur Guard products were developed in SarTec's laboratories and field tested at North Dakota State University (continued on next page).



SULFUR GUARD continued.....



sulfur in rumen fluid. As sequestering species are added to the rumen fluid, the concentration of free sulfur (sulfide anion) decreases. This is due to the nearly irreversible complexation of the negatively charged sulfur anions with the

blocked by sex (heifers and steers) and assigned within block to one of two treatments. One group (one pen of steers and one pen of heifers) was fed SarTemp® SG, mixed into the feedlot supplement. The supplement contained minerals, vitamins, Rumensin (300 mg/hd/d), and carrier feed products including corn, barley sprouts, and distillers grains. The other group (control) was fed the same supplement and diet without SarTemp® SG.

The cattle that received the SarTemp® SG treatment had substantially increased dry matter intake and average daily gains. The cattle were finished and shipped after 48 days on feed.

Sulfur Guard components were tested for their ability to capture sulfur (sulfide anion). Rumen fluid samples were collected from fistulated animals and used in these initial studies. The sulfur concentration of the rumen fluid was measured and adjusted to a normalized concentration of 200 mMol sulfide anion. Different cationic species were investigated for their ability to bind with and sequester sulfur (sulfide anion) contained in the rumen fluid. The graph shown is a plot of some of the species used to sequester free

positively charged elements in SarTemp® SG (with Sulfur Guard™).

In order to determine the feed intake effects of adding SarTemp® SG to feedlot finishing diets, a research trial was performed at the North Dakota State University Carrington Research Extension Center under the direction of Professor Vern Anderson. The results are shown in the adjacent table.

In this trial, forty-six Angus based feeder calves were

	Control	SarTemp® SG
Number of head	23	23
Start wt, lb	972.45	966.05
End wt, lb	1133.30	1147.50
DMI, lb/hd/day	22.07	23.18
ADG, Lb/hd/day	3.45	3.58
Feed Efficiency (DM/gain)	6.41	6.48

BEST WISHES STAN SHAFER

After almost 28 years of calling on customers and distributing products for SarTec Corporation, Stan Shafer will be retiring at the end of this month.

Stan has worked with SarTec Corporation since the mid 80's and has been instrumental in the company's success and growth. Based out of Wray, Colorado, Stan has always kept his feedlot customers his number one priority.

Stan, who will turn 80 years old



Stan Shafer (left) with SarTec's President Larry McNeff (right) at the 2002 NCBA Convention in Denver

this January, is one of the nicest people in the industry and all of us at SarTec wish Stan the best in his retirement and his future endeavors.

After Stan retires, Matt Wendorf will assume the Sales Representative responsibilities for the Colorado and Western Nebraska territory. Matt has been with SarTec Corporation for over 15 years and has extensive experience with SarTec's products and equipment.

SARTEC CORPORATION

617 Pierce Street
Anoka, MN 55303

Tel: 1-800-472-7832 or 763-421-1072
Fax: 1-763-421-2319

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SarTec[®] is a family owned and operated corporation located in Anoka, MN. Established in 1983, our mission has been to provide high quality, natural products and service to the agricultural industry. From our equipment to our products, we have a number of ways to help you best reach your goals. Individually we can make a difference; together we can perform miracles.

SarTec[®]

EMPLOYEE SPOTLIGHT - JOAQUIN "JACK" MARTINEZ

Jack Martinez has been with SarTec Corporation since early 2009. Jack was just recently promoted to Service Representative for the Colorado and Western Nebraska territory and (together with Sales Representative Matt Wendorf) will be taking over the responsibilities that are currently Stan Shafer's (Stan is retiring at the end of September—please see the preceding article on page 2).

Jack has already assumed many of his new responsibilities and he and his family will be moving to Colorado within the next few weeks. Jack is very friendly, knowledgeable and helpful and



Jack Martinez is the new SarTec Service Representative for the Colorado/Western Nebraska territory

has been a great addition to SarTec's service staff.

Jack started out at SarTec as an Equipment Specialist where he learned how to build and operate

SarTec's various grain conditioning and metering systems. As Jack mastered the operation and construction of the systems, he was promoted to Service Specialist and traveled to various feedlots throughout the country and in Mexico assisting in installing systems and servicing equipment.

Jack is mechanically inclined and can fix just about anything. In addition to English, Jack is fluent in Spanish and has a wonderful family (wife Mary, two daughters Adriana and Andrea and a son Joaquin Jr). Jack loves keeping busy and he enjoys fishing, spending time with his family and is quite an avid soccer player.

Have You Heard About....

SarStart[®] for Dogs?

SarStart[®] for Dogs contains a special formulation of 11 essential vitamins and natural plant saponins (GRAS). Saponins have been shown to boost an animal's immune system, destroy protozoa and help alleviate arthritic symptoms.



SarStart[®] for Dogs is a liquid product in an easy to use applicator. Simply squeeze the bottle to fill the dosing reservoir to the appropriate level (based on your dog's weight) and apply directly to the dog's feed.

Here's what some dog owners had to say after using **SarStart[®] for Dogs**:

"After giving SarStart[®] for Dogs to my older dog, he has more energy, more like when he was a puppy."

"Our lab is getting old. He was unable to jump into the back of the car when we were traveling. After giving him SarStart[®] for Dogs, he jumps into the back of the car without any trouble. SarStart[®] for Dogs has changed his life."

"My two young hunting dogs were lost for 8 days when they went to play in a nearby corn field. It was a hot, humid summer and when I finally found them, they were in terrible condition...full of parasites and ticks, and severely dehydrated. After several trips to the veterinarian, being wormed twice and dipped, they still had loose bowels, a bad hair coat and no appetite. I began to give them SarStart[®] for Dogs and within a few days I could see an improvement. Within three weeks, my dogs had normal stools, a shiny hair coat and better appetites. They looked like they were in better condition than before I lost them! I've fed them SarStart[®] for Dogs ever since."



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All sizes of dogs love SarStart[®] for Dogs.