

APPLE CIDER VINEGAR STORIES

by WILL WINTER, DVM

INTRODUCTION

About a year ago, I published the story I've included below which is about my experiences of using Apple Cider Vinegar experimentally as a rumen and immune tonic for my sheep and goats. The nice results I witnessed inspired me to begin recommending it for just about any imaginable health problem of livestock, pets and even farmers and ranchers!. And then something interesting began to happen. The stories started pouring in.

Turns out ACV when given to livestock really is a health tonic, but even more interestingly, we found out something else that we never knew about... it improves feed efficiency, increases average daily weight gain and even stimulates butterfat (or intramuscular fat) production. Listen to these stories:

~A feeder of stockers in Northern WI called to say that he had been giving his stockers hay as the winter began, but once he started adding ACV to the hay, instead of filling the hay bunk every 3 days as he always had, once the vinegar was added, now he was only filling it every 4-5 days. And they were gaining weight! This led to what we calculated as a 20% decrease in his hay bills.

~Pig farmers in AR began mixing 3 gallons of ACV per ton of hog feed. They compared several hundred baby pigs that received the vinegar to a matching batch that had everything else the same, but without the vinegar. The vinegar-fed pigs weighed 20% more at weaning and finished to slaughter weight a staggering 3 weeks earlier than their non-vinegarized pigs. (we are now repeating the trials with 4 gallons/ton and expecting even more stunning results).

~A researcher at the University of WI confirmed the results seen with the hogs when exploring the digestibility of their newly developed variety of flourey corn (as opposed to the standard flinty dent corn). When they added vinegar to the ground corn it began to digest away the prolamines, the protein of the endosperm, releasing at least 20% more starch (energy). This applies to all livestock eating silage, or other grain-bearing rations.

~Numerous dairy nutritionists and rumen experts have confirmed that the primary reason for these experimental results is that acetic acid (the main component of ACV) will stimulate the rumen microbes that are the subset that breaks down CELLULOSE, HEMICELLULOSE, and LIGNIN. These long-chain hydrocarbons are the un-mined "gold" of forages, basically locked-up but, when broken down, capable of yielding thousands of units of sugars and starch molecules. In essence, the rougher the hay, the stemmier the hay, the better the results from ACV. Vinegar breaks down acid detergent and neutral detergent fiber and turns it into energy.

~A large commercial dairy in ID began giving ACV to their dairy cattle in order to improve some high somatic cell count problems. As an unexpected result, they found that their overall butterfat shot up from 3.1% to 3.9% with the vinegar. They knew it couldn't be the ACV ("nothing works that good") so they stopped and down came the butterfat. As soon as they began using it, the 12% butterfat increase returned. They called to ask "what's the largest container of ACV can we get?" Oh, and the SCC problem went away too.

~A beef producer in KY fed his stockers adding 2.5-3 oz of ACV daily for only 24 days. Compared to another set at 24 days without any vinegar, they averaged an extra 0.43 pounds of ADG daily giving him an extra \$1011 (at \$1/pound of weight gain) with 68 steers and heifers. That is \$0.09 of ACV per head daily.

~A rancher in Tennessee recently concluded a test to see if he could achieve additional average daily gain (ADG) from feeding small amounts of ACV and molasses. He divided his 500# calves into two equal groups and they were placed in identical rotated pastures. He gave 6-7oz of the blend, mixing it at a rate of 60% molasses and 40% ACV. (these ratios may vary from farm to farm based on energy levels or Brix of the forages). He fed half of the mixture in the morning and half in the evening. RESULTS: At the end of a 60 day feeding trial the group receiving the mixture gained over 3/4# of daily gain over the non-supplemented group, resulting in an average improvement in ADG of 48# per individual. We can conclude that this small amount of supplement does not increase caloric intake to make much improvement whereas it is assumed to be this effective primarily because it was stimulating the rumen microbes for an improved feed digestion. Current prices of these ingredients are \$0.03/oz for ACV and \$0.01/oz for molasses. That means \$0.12 worth of the two products created over a dollar of daily gain throughout the feeding trial. Spending pennies to get dollars. That makes sense!

CAVEAT

Both Michael Wichman (the man who sells the good livestock apple cider vinegar) and I (livestock nutritionist and consultant) have found that to get these kind of results it is essential that the animals getting the ACV must be adequately mineralized using a good free-choice mineral, free-choice salt and basic forages and care. Obviously, you want animals to have their essential minerals anyway, but we know that the immune system runs on enzymes, structures which require adequate levels of zinc, iodine, selenium, copper, and other cofactors. These essential factors also include adequate levels of several vitamins such as C, B-complex, A, D3 and E. ACV should never be used merely as a substitute for correcting problems with moldy, low-brix feeds, inadequate management or crummy grass genetics.

THE REST OF THE STORY

Two summers ago, I used Apple Cider Vinegar on the newly-arrived additions of sheep and goats to my flock to rid them of the worms they brought with along as baggage from Kansas. In keeping with my work with herbs and natural medicine I wanted to cleanse them of parasitic pals without the use of a single poison.. To my great surprise and

happiness, it really worked! And I was up against stomach worms, coccidia and even the blood-sucking “barberpole worm” (Hemonchus).

I was doing this from a quite hopeful point of view because for many years I have heard consistently positive testimonials from others. But the results with my own animals was the most pleasant surprise of all. I didn't just throw an herb at them, I have been very careful to give them good grazing and browsing with plenty of woody shrubs plus they have always had free-choice access to good seasalt and minerals. These animals have never been more slicked-up and “in the pink” than they are this year. I've even used ACV as part of my total treatment plan for the dreaded deer brain worm (meningeal worm) which causes paralysis and death in all the dead-end hosts such as sheep, goats, elk, llama or moose. Two of my doelings died before I realized I had a problem, and several others were crippled. The results of this treatment saved the others. In the latter cases, since the symptoms are so dire, I combined the ACV therapy with five daily drenches of Agri-Dynamics wickedly-good herbal wormer Vermitox. I feel there was great synergy between the two.

I didn't even know ACV will chase flies away until the past year or so when I started listening to farmers tell me amazing stories of giving it as a “blast dose” and seeing the flies disappear within just a day or two. I doubt that anyone knows the exact mechanism, but what we do know is that it is non-toxic, it has no known deleterious effect on meat, milk or eggs, and that ACV usage has many other “positive side-effects”. One such experimenter was JOHN WOODS of US Wellness Meats, raising livestock near his home in Monticello, MO. John has been an advocate and evangelizer of ACV for many many years. John reported to me a few days ago that he was nipping his fly problems right in the bud, before there was an issue. He will tell you himself of his positive results. Incidentally, he had used the powdered dry before with less stunning results on flies, however, no one so far has established the exact right therapeutic dose for the dry. John is one of the largest producers of 100% grass-fed meats in the United States and a true herdsman himself, so needless to say, the John Wood Farm uses ACV as part of a complete herd health program of genetics, nutrition and management.

When I started giving my hogs ACV I poured the raw, unpasteurized vinegar right into Rubbermaid tubs then went to get water to fill up the tub. By the time I returned, the sows, boars and even the baby pigs had gobbled down every drop of vinegar. With their seriously puckered little faces looking like a cowboy who had just downed a shot of good whiskey, it looked as if they were saying.... “Yeow! Uh, more please....” Now I have been giving it to them as they like it, which can be straight, mixed 50-50 with water or as in the table given with this article.

These anti-parasite properties of such a simple farm cure got me very curious about the use of ACV on a regular basis. I figured that if it had such an effect by blast-dosing it, which usually requires nothing more than offering it in rubber or plastic tubs free-choice, there must be some benefit to giving it at a lesser, say maintenance dose. It turns out that this is exactly correct. In fact it is more beneficial if it is given to livestock in small

amounts every day over the long haul. It's always better and far cheaper to prevent parasites and disease than it is to cure them.

Coming from the many years I spent in college working with research and science, my little inner voice kept saying "but...where's the science, where's the science?" and I know many of you reading this will also be asking the same question. Of course, nanoseconds later I realized that there will probably not be a flood of scientific studies on ACV coming our way from land grant colleges since this is "folk wisdom", not an expensive new latest-greatest drug. In fact, the latest-greatest wormers are getting very poor grade cards lately. Alas, Nature always "bats last", and the worms and germs are rapidly becoming immune to drugs. Sadly, this is true for new vaccines and antibiotics as well. Those days when drugs seemingly ruled the world are gone. I think we can thank low-level or feed grade usage of drugs for selecting the strongest germs and worms for survival. We can also thank the use of the latest new product as the "silver bullet". We tend to want to throw it out there on top of bad management, bad nutrition and bad genetics. We have been conditioned, especially with aggrandized advertising, to expect the gods of science to come up with some sort of miracle salvation. But hey, I'm sure it's right around the corner, folks....

On a deep functional level, here's how it works. Many natural cures, including some herbs and ACV actually eliminate the parasite and pathogen infestations by making the animal not send out "devour me, I'm dying" signals (measurable electrical vibrations), there can be no risk of parasite immunity. In the same breath, one must always caution against the "silver bullet" thinking. What that means using a human example would be: don't smoke two packs a day, drink a quart of whiskey a day and live on junk food and say... "Yep, I'm taking my vitamin E pill every day so I won't get sick...". With livestock that means we must always cull weaker genetics, breed for the best, manage our forages for the highest possible brix readings, rotate pastures and instill good management throughout. Then add the ACV. That is what a winning program looks like.

To begin my research I turned to a Google search for the leading "researchers" for using ACV on livestock where I found thousands of citations. These stories come mostly from farmers and ranchers, but in my opinion, nothing beats this kind of "real world research". One of the first advocates that came up was GENE SOLLOCK of Iola TX who raises 100% grass-fed beef and meat goats. Gene retired after teaching vocational agriculture for over 40 years. You can see his testimonials yourself on his BS-free YouTube videos. I highly recommend them. After three years of merely adding one gallon of ACV to his 100 gallon Rubbermaid stock tanks, then refilling it over a 24 hour period as they drank it, he eventually simplified the system. Now he has installed Chemilizer units that add any liquid medication to the stock tanks. Both methods were highly effective against all parasites. To completely worm his livestock Gene adds only 1 oz of ACV per gallon of drinking water for at least a 24 hour period. There are some great visuals showing great gobs of dung beetles devouring and stockpiling manure on Gene's farm, something that could only occur once Gene stopped using worming poisons many years ago. Dung beetles and other soil livestock will begin repopulating within a year of poison cessation. His verdant pastures show the great end result of good management

of the biology of the soil. Interestingly, Texas A&M has picked up on Gene's field studies in their AgNews journal. Go, scientists!!

Perhaps the biggest advocate, and the person who has collected the most testimonials from farmers and ranchers is MICHAEL WICHMAN of Atkinson, NE. Mike is a livestock mineral formulator and owner of Wick's Livestock Nutrition. Mike says that he became a convert after listening to JERRY BRUNETTI discuss the benefits of ACV. He says that he doesn't even recall Jerry even mentioning parasite and fly control in the lecture but Mike was impressed with the impact of ACV on the digestive tonic effects. As most readers know, Jerry is a wizard when it comes to understanding rumen physiology and it is a clear and obvious fact that ACV aids the rumen in digestion of all the various forms of soluble fiber. These substances are the original source of what Jerry calls the "creme de la creme" of ruminant digestion. Mike states that if you don't believe this just measure the fiber strands coming from the animal in the manure. Use a colander or strainer and a stream of water. All fiber strands should be less than 1/3" in length and almost everything should pass through the strainer, if it doesn't, if you see long strands of hay-like fibers, something is wrong and there isn't good digestive action happening. Then stop using the ACV and watch what happens to the fiber in the manure. Within a couple of days the poor digestive action has returned. This is just one of the many reasons why ACV is totally cost effective to use on a regular basis. It is a food (acetic acid) and it breaks down fiber for food. To achieve this kind of rumen action, it takes about 1 oz of ACV per 250 pounds of body weight.

Mike has become such an advocate of the use of ACV for all livestock that he is now the largest distributor of ACV in the midwest. He is licensed to repackage and sell both certified organic as well as conventional vinegar. ALL of the vinegar Mike sells comes direct from the fermenter who works in Idaho. The vinegar can be purchased either in 55 gallon barrels (which is what I buy) or in 270 gallon totes. There is a slight price difference in organic over convention, but both taste and smell wonderful and fresh. Given the choice I recommend the use of the Certified Organic version. Every time I refill my own livestock tubs I smell fresh apples and frequently put the tip of the barrel pump on my tongue getting that stimulating bite of the fresh ACV. No wonder the animals like it!

That spring I was able to attend the first annual meeting of the Kiko Goat Registry producers. At the event, which included lectures, trade show and a large stock sale, I met RON POLETTE, of Ironton, MO, the main organizer and sponsor of the event. Ron raises Highland Cattle in addition to his large flock of meat goats which are primarily Kikos. At first his goats were reluctant to try the vinegar, and Ron wasn't quite sure how to give it to them, so he put it out 50:50 for his cattle. That was when he noticed a dramatic drop in fly populations to the extent that he told us that within a week or two "a chicken would starve to death following my cattle". Before long, not only did his body scores shoot up, but his feed consumption went down. This convinced him to begin adding one cup to each 20 gallons of water for his goats, which they learned to drink almost immediately. Some of the chronic culling problems he'd experienced in the past disappeared, particularly mastitis, high somatic cell count and milk flow problems with

multiple births. He then noticed a chronic dermatitis problem, similar to mange, showing up in some of his goats which he began trying to arrest or cure using nothing but the ACV. He said the results were nothing short of stunning, there was a complete resolution. For Ron, actually seeing it work on his own farm was the answer. He says "I'm from Missouri, the "Show Me State", and I had to see it myself, but now I'm completely sold on this ACV for my goats and cows. I want to save money on feed, medicines, and de-wormers and I have seen it work, despite the fact that nobody seems to know why." That just about says it all.

APPLE CIDER VINEGAR FOR LIVESTOCK HEALTH

(Note: These are general recommendations, when in doubt, check with your livestock health care provider.)

WHY ACV IS RECOMMENDED FOR VIRTUALLY ALL LIVESTOCK....

This is "live" apple cider vinegar, not white distilled nor "dry" acetic acid

- 1) ACV is primarily acetic acid, a natural volatile fatty acid found throughout the body and utilized by the animal as a direct form of pure energy and for butterfat and body fat production. It is absorbed directly, through the wall of the rumen.
- 2) Buffers (alkalizes) rumen and overall blood pH , Used to prevent or reverse acidosis, ketosis.
- 3) Digestive tonic - Use to prevent scours, bloat, gas, reflux, indigestion, poor digestion.
- 4) Used to prevent or remove virtually all forms of internal and external parasites.
- 5) Contains probiotics (beneficial microbes), minerals, vitamins, & nutraceuticals.
- 6) Immune tonic- Use to improve disease resistance (bacteria, viral, yeast, fungal, or toxin).
- 7) Contains high levels MALIC ACID which helps cleanse and heal the liver for better digestion, and detoxification of toxins and waste.
- 8) May improve texture and flavor of meat- No off-flavors to milk, meat or eggs.
- 9) Completely SAFE (after 2-3 days of age), EASY to administer, and very TASTY to animals.
- 10) It's Cost-Effective! Less Disease + More Efficient Digestion + Direct Nutritive Value

HOW TO GIVE ACV TO LIVESTOCK:

When mixing in water tank, add 1-2 cups of ACV / 20 gallons of water

For treatment: the standard dosage is 1 oz per 100# of body weight

Use this method if this is the only water source. For therapeutic indications, try a free choice container such as a rubber pan with a 50/50 ACV and water mix. For increased palatability, and as a powerful energy booster, mix with LIQUID MOLASSES, varying from 30% ACV to 70%. Increasing the molasses proportion will increase energy and palatability, it will also prevent freezing in the winter. Both ACV and molasses improve average daily gains, milk production.

Can also be sprinkled directly onto hay, silage or concentrate feed

USES FOR ACV IN LIVESTOCK PRODUCTION:

~DAIRY COWS - Recommended consumption: 4-6 oz/day. Drench with 1 cup of ACV & 1 cup water when needed. For treatment protocol: drench 3-5 days in a row until improvement is noted. For MASTITIS or high SCC, continue at the higher dose (one ounce per 100# of body weight) for 6 weeks.

~COW-CALF OR BEEF CATTLE - Recommended consumption 3-6 oz. per day. Will vary depending on body weight, stress level, season, quality of ration, and overall health condition. GENERAL RULE OF THUMB: 1 oz daily per 250# body weight.

~CALVES - Recommended consumption: 2-4 oz/day. Drench with 1-6 oz. of vinegar and 1-6 oz. water depending on weight. Safe after 2-3 days of age. For treatment: drench 3-5 days in a row.

~GOATS/SHEEP/DEER (ADULTS) - Recommended consumption 1/2-1 oz/day. Drench 20 cc of ACV & 20 cc Water. Drench 3-5 days in a row if sick. Offer free-choice 50:50 mix with water.

~KIDS/LAMBS - Recommended consumption 1/4- 1/2 oz/day. For treating illness: drench 10 cc of ACV & 10 cc water. OK to drench 3-5 days in a row. Safe after 2-3 days of age.

~RABBITS OR POULTRY - Mix 1 oz. of ACV/gallon of water or free-choice at 50:50 w/ water.

~ALL SWINE- If possible mix 1-2 cups ACV with 20 gallons of drinking water. Or offer in pan Free-Choice 50/50 with water. Mix with molasses too (see above). Goal: 1/2-2 oz ACV/day.

~ALL EQUINE- Offer in water, ideally 2-6 oz/day. Sprinkle on hay or 50:50 free-choice in pan. Used for colic, founder, or other therapy by drenching 1 cup ACV with 1 cup water, repeat.

RESOURCES and FARMS MENTIONED IN THIS ARTICLE:

~GENE SOLLOCK Sollock Farms, Iola TX 936-394-6181 texasgrassfed.com

~AGRI-DYNAMICS Jerry Brunetti agri-dynamics.com 877-393-4484

~CHEMILIZER injectors and water medicators chemilizer.com 800-543-7184

~US WELLNESS MEATS John Wood grasslandbeef.com 877-383-0051

~RON POLETTE Arcadia Valley Goats Ironton, MO productiongoats.com
314-808-7664

WHERE TO BUY GOOD APPLE CIDER VINEGAR

~ WICK'S LIVESTOCK FEEDS- Mike Wichman 402-340-3811 wickslivestock.com

ABOUT THE AUTHOR:

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