Livestock 360°
Southeastern New York Cooperative Extension Livestock News

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In this Issue

The Old Time Wisdom Issue

All Articles by Jason Detzel, Livestock Educator, Ulster County CCE unless otherwise noted

You can tell a lot from a person's hat. After finding my seat towards the top of the bleachers I took some time between sips of coffee to admire the patinas on each farmer's hat as they shuffled to their preferred seats at the livestock auction. Creased and crusted with the detritus of several harvests and the sweat of a many difficult days, these hats had survived many a scorching day and I also suspect they had also been forgotten beneath a weary head on as well. As the procession of local agrarian men and women filed into and onto the stands, there was a slight commotion towards the bottom of the bleachers. I watched and realized that the crowd had moved aside and was helping a few of the more elderly farmers find a seat to watch the action.

It didn't surprise me that these elders were being helped by the other community members, after all farming is family and these guys had been farming longer than I have been alive. I wasn't surprised that these farmers needed help to find their place at the bottom of the bleachers; they had sacrificed their bodies for what they love and to provide for those in the community around them. It didn't surprise me that they sat there and recognized this sale as the autumn harbinger that it was, that it has always been, and that there is another spring, followed by summer, after every winter. What did surprise me was the gulf of age between us. There were, for the most part, far older people in the room than younger.

Here was living proof of the fact that our farmers are quickly aging out of the industry and there are few replacements waiting in the wings. It takes a special kind of person to begin farming or ranching, which requires a tenacity that most people cannot find the will to muster. Difficult weather and harder decisions frame

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Cornell University Cooperative Extension
Ulster, Orange, Sullivan and Dutchess Counties

Claims About Apple Cider Vinegar


Photo Credit: NRCS

Chicken Waterer
This article appeared in the December 2012 Chicken Waterer Blog

Apple cider vinegar (ACV) is a folk remedy that is said to improve overall wellness and cure a variety of human diseases from arthritis to mental exhaustion. ACV is also said to improve overall poultry health and there are now many sources on the Internet that promote adding ACV to your chicken's water.

Below are two typical examples that explain the supposed benefits of ACV:

"Apple Cider Vinegar has been given to chickens for many years since it has numerous health benefits and supports the immune system. It is particularly good at times of stress when the immune system is low. ACV is full of vitamins, minerals and trace elements. It helps lower the pH level in the stomach, helping digestion and making it less friendly for harmful pathogens. ACV detoxifies the blood and helps remove mucous from with the body. This is particularly useful since chickens are particularly prone to respiratory problems and ACV can be of benefit in helping birds clear their airways..."

"Apple Cider vinegar is rich in vitamins, minerals and trace elements found in apples, especially potassium. It will normalize pH levels in the stomach, improve digestion and the assimilation of nutrients. A few more benefits of oral apple cider vinegar are:
Reduces intestinal and fecal odor.

Aids in digestion.

Helps break down minerals and fats.

Assists the animal to assimilate protein.

Assists the animal to convert food better.

It lowers the pH of the digestive tract which will make the environment less welcoming to pathogens and, therefore, reduce common infections and increase resistance to disease."

The Human Evidence

Because ACV has been so widely touted, we decided to dig in a little on this topic to see if we could learn more about ACV. In particular, we were interested in finding any research that might support these claims and data that would allow us to make dosing recommendations to readers of this blog and to users of the BriteTap poultry waterer.

Unfortunately, the claims made about ACV are not well documented. This is true both of consumption by both humans and poultry. Let's take a cursory look at some of the human evidence first....

A 2007 study on 11 humans who took 2 tablespoons per day of ACV showed that their blood sugar levels dropped

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3 Thinking of Feeding Seed? Think Again.

Feeding Cattle Seeds in Their Minerals to Improve Pastures

Paige Smart, Southeast AgriSeeds.
This article appeared in the January 2017 issue of Hay & Forage Grower.


Photo Credit: Huffington Post

Producers within the Fescue Belt struggle with depressed performance of their cattle. The fungus produced by an endophyte in Kentucky 31 fescue costs the industry an estimated $1 billion annually. Interseeding clovers boosts pasture quality and can dilute the impact of grazing KY-31. The two current recommended methods of establishing legumes, such as clover, into permanent pasture are no-till drilling or broadcasting.

Unfortunately, it can be costly to rent a no-till drill or large-scale broadcaster. Additionally, difficult topography can make it impossible to get large equipment over pastures. Some producers have turned to a method of seeding that is utilized in nature: feeding clover seed to cattle. By placing seed in a concentrate supplement or loose mineral, the hope is that it passes through the animal and establishes in pasture. Some producers have even suggested that coated seed (covered with inoculant and limestone) established better than uncoated seed.

This method of establishment is often seen in nature, particularly in the case of weeds and trees. Producers observed this dispersal method and have mimicked it in an attempt to easily establish desirable species. Although this practice has been used by farmers for many generations, its efficacy had not been studied in the field. Researchers from North Carolina State University attending an Amazing Grazing workshop were inspired by the innovation of the producers who were insistent that it worked, so the practice was investigated to determine if feeding seed to cattle was a viable option to establishing clover by frost seeding (broadcasting midwinter or spring).

When evaluating the seed-feeding method, it became clear that there were several factors that had potential to reduce seed viability. Contact with loose mineral, passage through the ruminant digestive system, as well as the competition with feces after passage were just a few constraints identified. Each of these factors was studied individually to quantify its impact on seed viability, along with a “big picture” study that determined what results producers should expect in full-scale pastures from this method of seeding.

Many barriers

It was suspected that contact with the mineral would reduce seed viability over time due to the high salt content. Germination of the seeds was measured after 2, 7, 14, 28, and 56 days of contact. After 14 days, coated seeds had a significant reduction in viability to only 70 percent viable and all seeds died after 28 days of contact, whereas uncoated seeds remained completely viable until 28 days of contact. It is suspected that the coating, which holds moisture, negatively impacted the seeds in contact with mineral. By holding moisture close to the seed, which likely contained salts from the mineral, it decreased the time needed for the salts to kill the seed.

The ruminant digestive tract is a very intense system that contains microorganisms capable of digesting fiber, rapid changes in pH, high temperatures, the grinding pressure of ruminal contractions, and repeated opportunity for chewing during rumination. To study the impact of passage through the digestive system on seed viability, fecal samples were taken from cattle consuming mineral containing either coated or uncoated seeds.

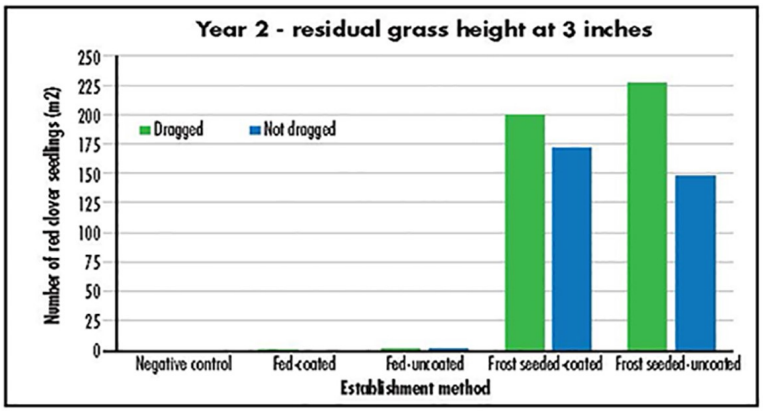
Continued on next page

Feeding Seed Continued.

After passage, the average viability of fed seeds ranged from 0 to 14 percent. Coated seeds had a lower average viability after passage, which is also suspected to be due to the moisture holding capacity of the coating. The reduction in seed viability from 96 percent out of the bag to 14 percent out of the animal is a clear hindrance on the success of this method.

Dragging helped

That small percentage of seed that survived passage through the ruminant digestive system had yet another barrier to face after passage: competition with fecal pats and established grasses in the pasture. The impact of feces on seed germination and establishment was tested in a small plot study. This study sought to measure the impact of competition after passage alone; therefore, seeds were not fed to cattle prior to being added to feces. This gave us the chance to observe how seeds performed in a best-case scenario.



We found that the ability of seeds to establish in fecal pats was dependent on the dragging of the feces. Dragging is a common practice utilized by producers to spread feces throughout the pasture, primarily to reduce fouling and to distribute nutrients more evenly. This method was also successful to enhance seedling establishment. Without dragging, few seeds were able to establish. This shows just how much an undisturbed fecal pat can interfere with establishment of the seeds that survive passage.
After combining all of these factors, the overall efficacy of establishment of red clover after feeding seeds was compared to frost seeding. Cattle grazed across 16 acres and were consuming seed mixed in with the mineral, which we called the “fed” pastures. When the soil was freezing at night and thawed during the day, plots were frost seeded with red clover.

The number of red clover seedlings per square foot that established in the frost-seeded treatments was about 20 for both coated and uncoated seeds. However, in the fed pastures, less than one clover seedling per square foot was established. The reduced viability after passage through the ruminant digestive tract along with the competition of fecal pats and their uneven distribution all reduce the success of this approach.
Producers who are looking to interseed clover should utilize frost seeding and not depend on the less effective seed-feeding technique.

Frost seeding can be easily done in late winter or early spring. Ideal conditions for broadcasting are when soil temperatures are freezing at night and thawing during the day. Using 2 to 3 pounds of white clover or 8 to 10 pounds of red clover, broadcast the seeds across closely grazed or mowed pastures. The target height of the pasture should be about 1.5 inches.

Our study showed that if the residual height of the grasses is higher than 3 inches, dragging the pasture after broadcasting the seed will improve seed to soil contact and, therefore, improve clover seed germination and establishment (see graph). When frost seeding, be sure to inoculate clover seed, particularly if seeding into soils that have been recently logged, have been in corn production for more than 10 years, or have not had legumes for a decade or more.

Contributors to this study included Dr. Matt Poore (NCSU Animal Science), Dr. Ben M. Goff (University of Kentucky Plant and Soil Science), Dr. Carrie Pickworth (NCSU Animal Science), and Dr. Lori Unruh-Snyder (NCSU Crop and Soil Sciences).

Link to full article

Hay and Forage Grower Magazine

5 Weeds Are An Indicator of a Soil's Health

What Different Pasture Species Can Tell Us About our Soil

Dixie Sandborn, Michigan State University Extension
This article was published by Michigan State University Extension.

What exactly is a weed? By one definition, a weed is a plant out of place. So a stately oak or beautiful rose bush could, by this definition, be a weed if not in a proper or useful place. Merriam-Webster defines a weed as "a plant that is not valued where it is growing and is usually of vigorous growth; especially: one that tends to overgrow or choke out more desirable plants."

Weeds can be a headache for most of us, but they can also be very helpful if we know a few basic principles. Weeds give us clues to the health of our soil in our lawns, landscapes, gardens and pastures. Although in pastures, a variety of plants including many classified as weeds will help give the animals nutrients they need.

Christy Sprague, a research scientist with Michigan State University's Department of Plant, Soil, and Microbial Sciences, states, "Weeds can tell you a lot about soil conditions. For example, field horsetail is a good indicator of poorly drained, low pH soils. Improving the drainage and increasing the soil pH by liming will help to manage field horsetail as a weed."

Sprague's research and MSU Extension program focuses on integrated weed management, biology, ecology and managing emerging problematic weeds, and understanding the interactions with weeds and other pests and pest/crop management practices. Her program emphasizes weed management in soybeans, sugarbeets, dry beans and potatoes.

The following list of weeds will give you clues about your soil's health by looking at the weed populations.

Signs of soil deficiencies:

Redroot weeds, such as redoot pigweed (Amaranthus retroflexus), are signs that the iron-manganese ratio is out of balance. It may indicate there is too much iron or too little manganese. It also indicates a soil that is very high in potassium and manganese and low in phosphorus and calcium.

Quackgrass (Elytrigia repens) is a sign of improper iron-manganese ratio.

Bitterweed (Helenium tenuifolium), trumpet vine (Campsis radicans), broom sedge (Andropogon virginicus), stinging nettle (Utica dioica), horsetail (Equisetum arvense) and wild buckwheat (Polygonum convolvulus) may all indicate a calcium deficiency in the soil.

Wild buckwheat (Polygonum convolvulus) also signifies low phosphorus and an excess of potassium.

Burdock (Artium lappa) indicates low calcium, high potassium soils.

Curly dock (Rumex crispus) loves compacted soil, low calcium and extremely high magnesium, phosphorus and pot.

Lambsquarters (Chenopodium album) grows in low phosphorus, high potassium soils.

Foxtail barley (Hordeum jubatum) likes low calcium, high magnesium, as well as compacted and poorly drained soil.

Knapweed (Centaurea maculosa) grows in soils that are low in calcium, humus and very low phosphorus levels.


Knapweed

Indicator Species Continued

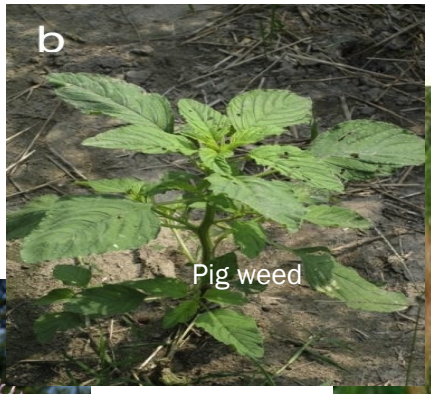
Oxeye daisy (Chrysanthemum *leucanthemum)* prefers to grow in soils that are low phosphorus, high potassium and high magnesium soils.

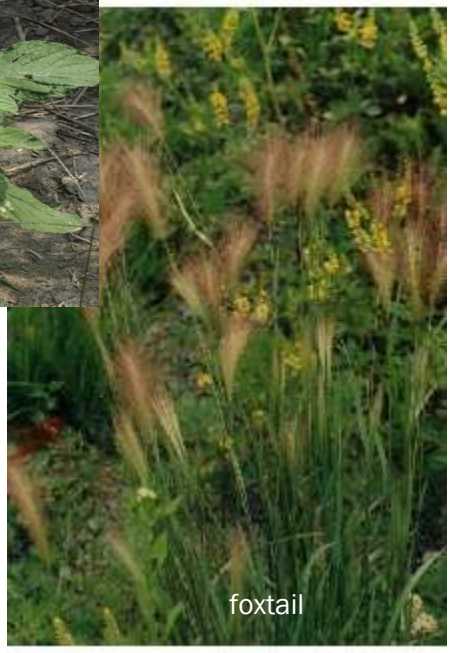
To learn more about the weeds in your lawn, landscape, garden or pasture, along with pictures for identification, visit MSU's Identifying Weeds in Field Crops and Gardening Know How's Weed Identification Control.

This article was published by Michigan State University Extension. For more information, visit http://www.msue.msu.edu. To have a digest of information delivered straight to your email inbox, visit http://www.msue.msu.edu/newsletters. To contact an expert in your area, visit http://expert.msue.msu.edu, or call 888-MSUE4MI (888-678-3464).

Full website

http://msue.anr.msu.edu/news/weeds_are_an_indicator_of_a_soils_health





7 Bovine Phrenology

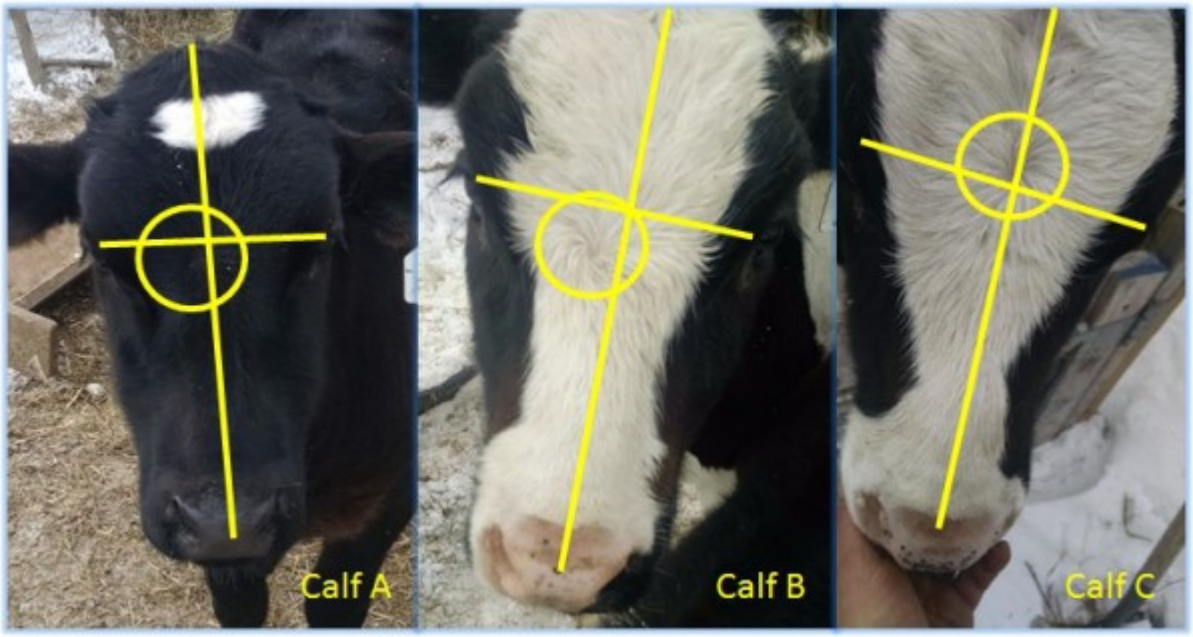
Did you know some folks say they can assess the dispositions of horses and cattle (but not goats), based on how hair grows in whorls ("cowlicks") on their foreheads?

Dave Perozzi

This article was published on the Wrong Direction Farm Blog.

The ancients liked to use physiognomy to characterize humans, but contemporary science best supports the use of physiognomy to characterize animals. That makes some sense, since wild animal breeding is based on natural selection criteria and domesticated livestock breeding – at least when the breeder is doing things correctly – is based on phenotypical selection. Humans and, ahem, even livestock breeders, tend to use less sound criteria in selecting mates.

While it might seem easy to dismiss as folklore, there are some physical characteristics of cattle that give indications about their temperament. One such trait is the facial hair whorl. Most cattle have a whorl on their face; some have none, some have more than one. Statistically, an animal with a whorl high on the face is more likely to be flighty whereas a midline or lower whorl indicates a calm disposition. Animals accustomed to a person might not display the same degree of temperament problems, but the presence of a high facial whorl becomes a bigger factor when cattle encounter an unknown person.



Calves A and B exhibit the whorl pattern below the midline; Calf C has a whorl slightly above midline. Calf C has a whorl slightly above midline. I don't have an example of a vertical whorl.

We have been raising four calves this winter with plans to sell three of them at auction as feeders in the spring. We'll keep and raise the best one for ourselves. When we evaluate which calves will be offered for sale we evaluate them on several criteria. Of course we are concerned about growth, health, and conformation, but temperament is certainly an important consideration. So here's the weird thing: calves A and C are in a close tie for best growth, health, and conformation in this group. But calf C is by far the calmest and friendliest calf in the group, even though hair whorl patterns would indicate the opposite should be true. They are all purebred Holsteins, from the same farm, from the same long-standing breeding program. It would have been nice to have the theory match reality.

Continued on next page

The point to be made is that although judging cattle by hair whorl is probably statistically valid (and it is certainly more valid than using whorl patterns in humans to predict handedness or homosexuality), there are always a number of individuals that deviate from the mean. Judging by whorl pattern might be good as a general rule, but biological systems are complicated things that almost never can be entirely characterized by simple rules of thumb. We'll always need to make wide allowances for exceptions.

Note: Besides facial hair whorls, some cattle experts evaluate cattle with a wide array of physical observations, including hair whorls along the flank, neck length, head/neck posture, hair coat length, and various proportional measurements. None of these are as well supported as facial whorls, so I can't say that they are equally valid. A good place to start reading on this topic is Reproduction and Animal Health. Like the majority of the for-farmers/by-farmers books out there it isn't well-written, but it is full of provocative ideas. I wish I could find a resource for comparable physiognomic markers for pigs, but I don't think anything exists. Even the Canadian Prairie Swine Centre's website only references research on cattle traits for this topic. So we're on our own for the pigs.

Link the Wrong Direction Farm Blog

(old timey wisdom cont.)

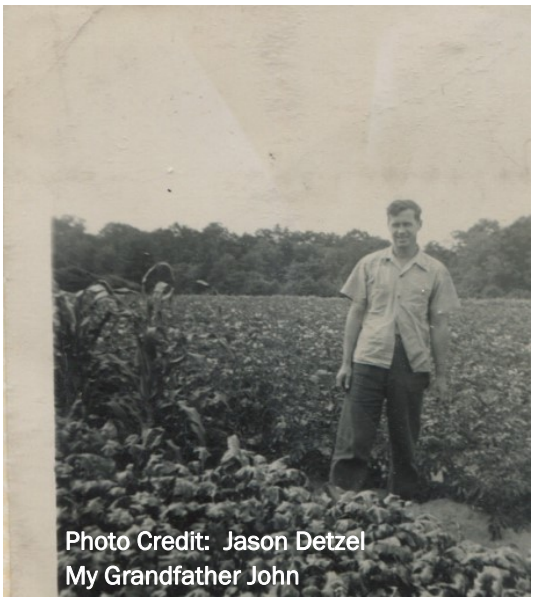


Photo Credit: Jason Detzel
My Grandfather John

the daily activities of most livestock producers, and that is on the good days. If an individual does have the will, they are also charged with absorbing the vast amount of knowledge that is acquired working those long days and nights. This is not to say that farming is all toil and loss, quite the contrary; this is a business that allows you to spend time with family, feel the rhythms and laws of nature, and flex your creativity across a variety of separate but equal enterprises. This is what makes farming such a unique way to make a living for those that are able to find it.

I recently read a plea in an online forum from a young farmer who had just lost his father. His loss was palpable on the screen as he openly questioned the group on how he could continue to operate the farm with the loss of his father who was a vast repository of knowledge and wisdom regarding their business. The response was swift as other farmers offered unending advice and support for whatever the young man needed in the future. Technical manuals for his particular tractors and machinery were scanned and emailed, preferred seed and hay settings were reported, and most importantly, a sense of community grew around him in this dark time.

This situation is not a unique one but it is a fortunate one. It may have been easier for this young man to shut down the machinery, sell of the property, and move to a desk job. We are lucky that he was one of the few who recognized that the farming way of life was for them and continue to fight for it. There will come a time when the barriers to farming outweigh the advantages, and without continued support of our farmers, our agrarian way of life will never be the same.

And that is how the theme of old time wisdom can into fruition over the winter. After countless conversations with those who have seen and done it all before I am constantly humbled by their consideration and patience with someone as young and stupid as myself. These men and women are vast repositories of knowledge that I respect like the living libraries they are and lately I have realized, to my horror, that once they are gone so too will be that knowledge. So here is to our agrarian grandfathers, Nanas, and Babkas and to all they know and all that will eventually be forgotten…

The average age of a farmer in New York State is 58 years old.

Behind the Folklore: Cows Lying Down

Do Cows Really Lie Down When It Rains?

This article was published in The Weather Club Blog, hosted by the Royal Meteorological Society


Photo Credit: NRCS

If a well known piece of old countryside folklore is to be believed, a sure sign of the imminent arrival of rain is the sight of a herd of cows sitting down in a field. But then again, if old countryside folklore is to be believed, black dogs are devils and Londoners can't be trusted, so it's a claim that cries out for further examination.

In truth, it's fairly difficult to find a definitive answer as to whether or not the idea of a bovine weather gauge is pure bunkum, although it almost certainly is. So far, there's been no large-scale formal study of this phenomenon. The only ones who know for sure are the cows – and they're not telling.

At the heart of this myth lies the simple observation that cows often lie down shortly before it starts to rain. The problem with this, in evidential terms, is that both of these events – cows lying down, and the heavens opening – happen with such frequency that proving a link between the two is pretty much impossible. The fact that, in one of the dampest countries in the world, it quite often starts to rain shortly after some cows lie down is probably true - but it's also equally likely that a cow will lie down shortly before somebody talks about football or eats a sausage, yet nobody has ever suggested that cows are accurate predictors of sports-based conversations or bad diet. Cows often lie down before the sun comes out too, but nobody has ever pushed that as being significant. No country with less frequent rain seems to have made the same observation – if Indian cows all flopped down en masse with the coming of the monsoon that would be impressive.

And if cows do lie down before it rain, what on earth is their motive? It has been suggested that cows don't like sitting in wet grass, or dislike eating wet grass and so are keeping a patch dry, or that cows slip over when it gets wet so are taking precautionary measures. Can cows really be so precious? The only thing we know for sure is that they do tend to lie when chewing the cud – something that has absolutely no bearing on the weather.

The last word should go to meteorologist Bill Giles: ""I used to ask a farmer friend, who swore by the saying, what happened if half were standing, and half were lying down. He turned to me and said one word: 'Showery'!""

Link to original article

The Human Evidence


Photo Credit: NRCS-USDA

Because ACV has been so widely touted, we decided to dig in a little on this topic to see if we could learn more about ACV. In particular, we were interested in finding any research that might support these claims and data that would allow us to make dosing recommendations to readers of this blog and to users of the BriteTap poultry waterer.

Unfortunately, the claims made about ACV are not well documented. This is true both of consumption by both humans and poultry. Let's take a cursory look at some of the human evidence first....

A 2007 study on 11 humans who took 2 tablespoons per day of ACV showed that their blood sugar levels dropped by 4-6%. This indicates that ACV might be helpful in treating diabetes. However, the study should be looked at as one that suggests that further research should be conducted, not one that firmly establishes the benefits of ACV.

A study of people who ate salads dressed with oil and vinegar showed six days a week had lower rates of heart disease than those that didn't. However, it wasn't clear that the vinegar was the reason.

Other human studies suggest potentially conflicting results of using ACV. One study associated consumption of ACV with lower rates of throat cancer. However, a second study associated ACV consumption with higher rates of bladder cancer.

For more information about the above mentioned studies, check out the article on Apple Cider Vinegar at WebMD.

Our Recommendations

At present, we don't understand the benefits or the risks of adding ACV to poultry water. It's possible that ACV might improve poultry health in one regard and diminish it in another. (Such was the case with the human study that showed ACV potentially lowering rates of throat cancer while raising rates of bladder cancer.)

One thing that is certain.....

The broad claims made about ACV on the Internet are grossly exaggerated and are not supported by sufficient evidence. Specific claims about ACV's ability to lower pathogens in the gut are misleading in our opinion because the claim implies that you can improve your flocks' health by adding ACV to the water. In fact, the only research on this matter relates to lowering bacteria levels prior to slaughter to reduce contamination during processing. We don't believe this is a benefit most backyard chicken owners are seeking.

Continued on next page

Upcoming and of Note 11

Sheep and Goat Parasite Control (Kingston)

This class will review the ways that you can identify, monitor, count, and treat various parasites that effect small ruminants in our area. These parasites are the leading cause of decreased production in our sheep and goat populations. We will review FAMACHA, fecal sampling, and the 5 point check. When the course is completed, participants can sign up for our monthly fecal sampling labs here at the office.

Two separate classes: Tuesday, May 1st, 6:00-8:00pm
Tuesday, May 8th 10:00 am-1:00 pm

Link to parasite control

Animal Fun Day Ottisville, NY

Want to learn more about animals while having fun? Come to the 4-H Animal Fun Day!
It's an annual awesome FUN, educational day for animal lovers! Our 4-H animal science clubs and programs will have animals and fun hands-on activities and crafts for all ages to enjoy! This event is open to the public. Scouts are welcome! Some requirements towards Animal Badges can be earned.
Saturday June 9th, 10:00am-3:00pm
Link to fun day

Multi Species Showmanship Clinic, Jeffersonville, NY

Free clinic hosted by Sullivan County CCE focused on refining showmanship skills, learning about different livestock and how to safely handle them. **June 3rd, 1:00pm-3:00 pm**
Link to clinic

Progressive Ulster Graziers Pasture Walk

This free event will be hosted by CCE Ulster County and will consist of a visit to a local ranch where we discuss various pasture based plant and animal health topics. Open to the public but pre registration required. Please contact Jason Detzel jbd222@cornell.edu for more information.

Apple Cider Vinegar continued

Here are our recommendations:

1. Leave the ACV in your kitchen cabinet and supply your birds with plenty of clean water.
2. Change water daily to make sure its fresh.
3. Use a waterer like the BriteTap chicken waterer since it completely shields your chicken's water from known contaminants such as dirt and droppings.
4. In the summer, add some ice cubes to the water supply to keep the water cool. This encourages birds to drink more and thus keeps them hydrated.

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WEEKLY LIVESTOCK UPDATE

Are you receiving Livestock Weekly Update by e-mail on Fridays? If not, go to http://eepurl.com/bei625. Choose Commercial Livestock as an option (you can choose other topics too). Keep up to date with programs, alerts and news for livestock producers.