

Central Florida Ag Masters

A Monthly Newsletter for Stockmen, Hay Producers, and Equine Enthusiasts in Central Florida

NEWS YOU CAN USE: SB 712 in Plain Language

By Caitlin Bainum, UF/IFAS Marion County Extension &
Meg Brew, UF/IFAS Lake County Extension

Senate Bill 712, also known as “The Clean Waterways Act”, was signed into law on June 30th of 2020. The intention of this bill is to reduce nutrient loading (aka pollution) to Florida’s waterways from both permitted point-source contributors as well as non-point source contributors like residential septic systems and farming operations.

If your farm is located within a Basin Management Action Plan Area (an area designated as being especially environmentally sensitive) then by law you must either enroll in the FDACS BMP program (a free program that may allow the landowner access to cost-share money when making improvements to their land that are geared towards protecting water quality) or install self monitoring wells (at high cost). SB 712 has resulted in two major changes to the way the BMP program is implemented in Florida and it is important that you are aware of these changes.

The first change is that SB 712 requires FDACS to make implementation verification (IV) site visits to every property enrolled in the BMP program once every two years. During these visits, an OAWP field rep will check that the agreed upon BMPs are being practiced and collect required nutrient application records from the enrollee.

The second change is that SB 712 requires FDACS to retain records related to the land application of nitrogen and phosphorous, which means that all landowners enrolled in the BMP program must keep records of the total pound of nitrogen and phosphorous (P₂O₅) from all sources (including biosolids) that they have applied to their land. FDACS has created a Nutrient Application Record Form (NARF) that can be used as a hard copy, printable PDF, or in electronic form. Producers may also design and use their own form so long as it provides the same basic information. During your IV you will give the OAWP rep a copy of your NARF, keeping the original for your own records. The information collected during your IV is not considered public information and will be kept confidential.

UF/IFAS Extension has zero regulatory role when it comes to BMPs (or any other policies). Our job is not to enforce rules, but to help you better understand them. Please do not hesitate to reach out to your local Extension Agent with questions about BMP compliance, SB 712, or any other complex issues that may leave you scratching your head, we are here to help you!

Acronyms

BMP—Best Management Practices

FDACS—Florida Department of Agriculture and Consumer Services

IV—Implementation Visit

NARF—Nutrient Application Record Form

OAWP—Office of Agricultural Water Policy (an office within FDACS)

For more information on BMPs and SB 712 please visit:

[SB 712 FAQs](#)

[BMP Overview](#)



Photo by Camila Guillen UF/IFAS

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DID YOU KNOW?

- Cattle spend a lot of time chewing their cud and can move their jaws up to 40,000 times a day!
- A 2013 study in the UK found that horse were calmer when listening to classical or country music and more agitate when jazz or rock was being played.
- The color of a hen’s earlobes will tell you what color eggs she will lay. Red ear lobed chickens lay brown eggs, while white ear lobed chickens lay white eggs.

PERSPECTIVES ON PASTURE

Winter Forage and Culled Veggies for Cows

By Wendy Mussoline, UF/IFAS Putnam and Flagler County Extension

The winter season is upon us and that means just about everything except the ryegrass has turned brown. Most beef cows are with calf and their nutritional needs are the highest this time of year. Without proper nutrition, pregnancies fail and lactating mothers cannot keep up with the required milk production to support a healthy calf. Successful cattlemen need to know how to grow forages all year round and they must become proficient “grass farmers”. Some common cool-season forages grown in our area include ryegrass, oats, cereal rye, pearl millet, and clover. Cattlemen that may be interested in reviewing UF’s most recent list of recommended varieties should look up the EDIS publication entitled “[2020 Cool-Season Forage Variety Recommendations for Florida](#)”. Dr. Ann Blount is the lead author but contributing UF Forage Specialists from all over the State have provided their two cents. The document provides a description of each forage type, specific varieties recommended, planting dates, seeding rates and lots of practical instruction. Cool season forages should be planted around mid-October through mid-November, but it’s never too early to start planning for next year.

Another option for hungry cows in the wintertime is culled vegetables. An outstanding opportunity for local Flagler County cattlemen is to fill their trucks with culled cabbage from the Hollar & Greene packing shed on County Road 305. When they are packing cabbage, the conveyor belt is designed to automatically dump non-marketable cabbage heads and excess outer leaves into a dump truck or trailer. Yesterday, I was watching those trailers fill up in just a matter of minutes. The drawback is that cabbage consists mostly (90%) of water and cows often get full before they tap into the real nutritional benefits. With 90% water, that means that 10% is dry matter. Within the dry matter fraction, it contains lots of crude protein (24%) and exceptionally high total digestible nutrients (85%) compared with common forage grasses. While it should not serve as the entire meal, it provides supplemental calories and nutrition. Another fantastic resource is the new Comarco Eggplant Processing Plant in Putnam County. They generate approximately 16,000 pounds of culled eggplant, skins, and tops every week. The nutritional benefits are higher and more quickly accessible since it only consists of 50% water. The dry matter component of the raw eggplant constituents has 17% crude protein and 70% total digestible nutrients. For a list of other culled vegetables and their nutritional benefits for cows, consult the UF EDIS publication entitled “[Utilization of Cull Vegetables as Feedstuffs for Cattle](#)”

“A good farmer is nothing more nor less than a handy man with a sense of humor” - E.B. White

Weed of the Month: Thistle

By Clay Cooper, UF/IFAS Extension Citrus County

In Florida, there are at least 9 different species of thistles and if left untreated, they can quickly become problematic. A single thistle plant can produce at least 4,000 seeds, greatly increasing the chance of higher thistle populations the following year if left uncontrolled. Thick stands can reduce grazing, result in less forage, and ultimately reduce livestock production. In Florida, it is essential to scout fields early as the rosette growth stage occurs primarily in the winter months. Bolting occurs from late January to July, and flowering occurs from April through August.

Identification:



Rosette

Bolting

Flowering

Control Options:

Mechanical Control:

Though mechanical control can be utilized for thistles, timing is critical. Ideally, mowing should occur between April to June when the plant is bolting, prior to flowering. Mowing the plant in the rosette stage is ineffective as it will regrow.

Chemical Control:

The use of herbicides are often the most cost effective form of management in pastures. Again, timing is key, as thistles are highly sensitive to many commonly used herbicides in the rosette stage. The table below shows control rates of thistle at three different growth stages with common pasture herbicides.

Herbicide	Rate	\$/A ^a	Thistle Growth Stage		
			Rosette ^b	Bolting ^c	Flowering
			% control		
2,4-D	2 qt/A	6	90	85	40
Metsulfuron ^d	0.3 oz/A	4	90	40	40
Weedmaster	2 pt/A	5	95	90	55
Remedy Ultra	2 pt/A	15	95	90	75
Pasturegard HL	1.5 pt/A	18	95	90	70
GrazonNext HL	1.0 pt/A	8	99	95	90

a Approximate herbicide costs.
b The rosette stage is when the thistle forms a low-growing ring of leaves.
c The bolting stage is when the thistle forms a stalk and prepares to flower.
d For use in bermudagrass only.

Table and information adopted from,
<https://edis.ifas.ufl.edu/pdffiles/AG/AG25300.pdf>

For more information on weed control, please contact one of your CFLAG Agents.

BEEF CATTLE CORNER

Tips for Properly Vaccinating Cattle

By Laura Bennett, UF/IFAS Pasco, Sumter, and Hernando County Extension

No one likes buying something, getting it home, and finding out it doesn't work. This very well could be happening with your cattle vaccines if they are not stored, used, and administered properly! Vaccinating cattle is key to ensuring a safe, wholesome product for consumers. Even more so, "proper" vaccination is what makes beef safe and a high-quality product. Our Beef Quality Assurance (BQA) program was designed for the purpose of guiding cattlemen to utilize such practices. What makes BQA even more appealing is that the same principles that increase quality of our beef also increases profitability for cattle producers.

Here are a few quick tips to make your vaccines more likely to be effective. Remember, the label is king! Always read the labels to be sure you know exactly how to store and administer them.

Storage: Vaccines should be stored in a working refrigerator (dark and at 35 to 45 degrees.) That old refrigerator in the barn needs to be checked to see that it is indeed "working."

Mixing: Do not reconstitute vaccines more than 45 minutes to an hour before they are used. Once the clear portion is mixed with the dry portion, the time starts ticking on how long the antibody properties will remain active. Vaccines that do not require mixing should be used on the day they are opened due to possibilities of contamination in the container. Also, never mix two different vaccines into one syringe. They will interfere with one another and not work.

Handling: At the cow pens, the vaccines need to be kept cool and out of the sunlight during the entirety of the cattle working event. UV sunlight is very effective at killing bacteria and viruses and consequently our vaccine components. Coolers with areas to insert vaccine guns while waiting for the next animal are very useful for protecting your investment. You may need to gently shake the vaccine to keep it properly dispersed in the gun or container.

Vaccination Location: Always choose subcutaneous (under the skin) injections before intramuscular (in the muscle) when given the option. We eat the muscle! If there is a reaction or abscess, that must be removed at processing. Also, a subcutaneous placement is more likely to have the vaccine absorbed appropriately and in its entirety.

Needle size: For cattle, 18- or 16-gauge needles should be used. Anything finer (20 gauge or higher) is very apt to break or bend. A broken needle is a dangerous thing! This is not something we want consumers to find in their meat. The needle should also be less than 1 inch long, preferably closer to $\frac{3}{4}$ of an inch. This will help to make sure you stay under the skin and not go into the muscle. Using new needles every 10 head will also insure that a dull needle will be less likely to damage tissue. Never straighten a needle that bends! Throw it away because its integrity will be compromised, and it could break.

Withdrawal times: Follow the withdrawal times on the label before you sell any animals. These times are determined by the Food and Drug Administration for products to clear an animal's system and be safe for the food supply. With that in mind, do not take any animals to the livestock market until this withdrawal time has expired. You must always assume the animal could go straight to slaughter.

Always consult with your veterinarian to design a vaccination plan. Your County Livestock Extension Agent can also give you guidance. A good, properly administered health protocol prevents many animals from ever needing any medications later, and that makes for a healthier food supply.



Photo Credit: Laura Bennett, UF/IFAS



Photo Credit: Laura Bennett, UF/IFAS

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EQUINE EXPERTISE

Equine Gut Health: Fact or Fiction?

By Caitlin Bainum UF/IFAS Marion County Extension

Owning horses is like having potato chips, you can't have just one. With each horse comes a labor of love in ensuring they are well managed, especially when it comes to overseeing their gut function and keeping them free of colic, ulcers, and other gastric distress. Depending on your farm's location and overall farm management, the ingestion of sand might be unavoidable in your horses. In the quest to keep our horse's digestive systems happy and healthy, the singular most important nutrient a horse needs is water. Sufficient water intake is the first key to maintaining proper gut function. Let's explore a common misconception when it comes to keeping the equine gut healthy, usually with prevention of colic at the front of our minds. We will decode how a popular gut remedy works and decide if it's worth the investment or potentially a gimmick.

When it comes to prevention maintenance there are endless products on the market, and it is easy to leave money on the table in feeding our equine athletes. The first area of prevention maintenance in many barns are high fiber psyllium products used as a laxative to clear sand build up in the gut. The age-old technique is to feed horses these products monthly to purge the GI tract of sand, to minimize the potential of sand colic. The psyllium swells in the stomach, collecting the sand to be passed in the manure, at least this is the theory. Unfortunately, research does not necessarily support this theory and there is only mere anecdotal evidence. Let's look at the equine digestive tract to understand where these products fall short. Once a horse consumes a meal it is funneled from the esophagus to its small stomach where breakdown and absorption of feed begins before passing to the small intestine where most digestion and absorption occurs. Enzymes help break down food particles and nutrients are absorbed through the walls of the small intestine and into the bloodstream to be passed where they are needed. Any feed particles that are left undigested from the small intestine head to the last stop in the digestive system, the large intestine or cecum which comprises nearly 60% of the horse's digestive tract. This high-functioning large intestine houses many microorganisms and is the reason horses can break the cellulose bonds of forage and derive

nutrients from it. Most of the sand a horse picks up through grazing or other means ends up in the cecum.

Let's let logic seep in to see how psyllium is not quite the hero we always thought it was. Feeding many psyllium products on the market to our horses is like any other meal to the digestive tract although it does contain more fiber than many grains, in that it is likely to be broken down by the small intestine. To be effective in removing sand build up, these products must make it to the cecum. However, there is not enough fiber in the recommended dose of these products to effectively reach the cecum and remove the accumulated sand.

We like to bring solutions here, so let's investigate other management tips to aid in the inevitable instance of sand in the gut. The first tip might seem obvious but reduce exposure to sand when possible, such as feeding your horse using hay nets or mangers and placing rubber mats under feed tubs. In Florida keeping sand out of reach is not so simple, and consumption of sand is likely at some point. We need a solution that will make it to the cecum, let's focus on forage! A good amount of roughage in the diet is the recommended solution for maintaining a happy, sand-free gut. This is because forage is broken down in the cecum by the microbes that live there and can keep sand from accumulating as it passes through. A horse should eat 1.5-2% of its body weight in forage daily.

So far, feeding psyllium to prevent or to treat sand in the equine gut is a myth according to science. A better approach is simply enforcing a high fiber diet, using hays and fresh forages to meet the nutritional needs of the horse when possible. As horse owners, there are plenty of ways to spend money at the feed store, be sure to spend in areas that are proven effective, otherwise, buy yourself something nice.

For an additional explanation, have a look at this study done at the University of Florida, "Failure of Psyllium Mucilloid to Hasten Evacuation of Sand From the Large Intestine", Hammock et al. [Failure of Psyllium Mucilloid to Hasten Evacuation of Sand From the Equine Large Intestine \(ufl.edu\)](#)

SMALL RUMINATIONS

Haemonchus Contortus: A Tiny Monster, A Big Fright

By Meg Brew UF/IFAS Lake County Extension

When it comes to internal parasites, what you can't easily see (with the naked eye) can certainly hurt your sheep and goats. *Haemonchus contortus*, commonly known as the Barber's Pole Worm for its characteristic red and white striped coloring, is the most serious internal parasite (and arguably the most serious health threat) for small ruminants living in the subtropics. This stomach worm reproduces rapidly (a single worm, which lives for only 25-50 days, can produce up to 250,000 eggs) and is a voracious blood sucker.

This miniscule monster thrives in Florida's climate with eggs hatching most readily during our warm, humid, rainy summers. Over the cooler winter months (depending on temperature) worms may go into a state called hypobiosis where they become metabolically inactive and even more resistant to treatment. The clinical signs of *H. contortus* infection are a result of blood loss. Infected animals may develop hypoproteinemia (a deficiency of blood proteins) as well as anemia. A condition known as "bottle jaw", a pronounced soft swelling under the jaw, can result from low blood protein. Signs of anemia include pale mucus membranes, fatigue, and panting upon even minor exertion.

If the infection is left untreated the parasite will continue to feed until the animal loses a critical volume of blood and dies. An acute infestation, especially of young or otherwise vulnerable animals, can result in rapid death when the animal bleeds out in a matter of days due to massive bleeding in the intestines.

Barber's Pole Worms cannot be seen in the manure but their eggs can be readily identified via fecal egg count with the aid of a microscope. Another useful tool in the war against Barber's Pole Worm is the FAMACHA card. This is a system, developed in South Africa and introduced to the U.S. by the American Consortium for Small Ruminant Parasite Control (www.ascrpc.org), that allows trained practitioners to match the color of the eye's mucus membranes to a chart and evaluate the degree to which the animal is experiencing anemia. This tool allows producers to identify, and selectively deworm, those animals who need treatment while avoiding treating those that do not. Selective treatment of *H. contortus* is critical to addressing and minimizing issues related to dewormer resistance. Producers can also use the FAMACHA card to help identify animals which may be more susceptible to infection in order to cull them and/or avoid using them in their breeding program.

Management techniques such as practicing rotational grazing with either a long rest period or grazing small ruminants in rotation with cattle or horses (who are not impacted by Barber's Pole Worm), using browse to encourage eating higher off the ground, and managing stubble height of grass and stocking rate of pastures can also help to prevent *H. contortus* from wreaking havoc on your herd. For more information on parasite control in small ruminants, or any livestock species, reach out to your local county Extension Agent and be sure to check with your vet before making changes to your herd health program.



Photo by UF/IFAS

"I would rather be on my farm than be emperor of the world"
- George Washington



Photo Credit: Meg Brew UF/IFAS

UPCOMING CFLAG PROGRAMS

2021 CFLAG Spring Forage Field Day

March 18th 11am-12pm (Webinar) and March 19th 10am-12pm (Field Walk)

Join us online for a webinar covering land prep and planting methods as well as the benefits of cool season forages on Thursday, then head down to our experiment plots in Kenansville on Friday to see for yourself how this year's cool season forages performed. To register please click [here](#). Free to attend. Facial coverings must be worn on Friday. Please call Brittany Justesen in Osceola with any questions 321.697.3000

2021 CFLAG Spring Ranchers Forum

March 22nd, 23rd, and 24th, 6:00p-8:00pm (Online)

Presented online for the first (and hopefully only) time, join UF experts and fellow ranchers for discussions on selling your own meat, BMPs, vaccination protocols, and other topics of interest to Central Florida Ranchers. No charge to participate (but no steak lunch this time either). Register online [here](#). Contact JK Yarborough in Orange County with any questions 407.254.9208

Save the Date: CFLAG Small Ruminant Production Conference

June 15th, 16th, and 17th 2:00-4:00pm (Online)


Registration details to follow. Topics to include hay sourcing, cool season forages, parasite management, kidding/lambing, and selection for reproduction.

WHAT ARE BMPs?

And what do they mean for ranchers?

Best Management Practices, often called "BMPs", are practices that ranchers implement to reduce the amount of fertilizers, animal wastes, and other potential pollutants that could impact water quality. Typical cattle BMPs vary depending on the operation, but may include applying fertilizer based on the results of a soil test, keeping accurate records of fertilizer applications, using a grazing management plan, and managing high intensity areas to prevent runoff.

For more information on the FDACS BMP Program, or to get enrolled, contact your FDACS Field Rep or call 863.467.3250



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ABOUT CFLAG

We are a professional organization of UF/IFAS Extension Agents who provide research based education on livestock and forage production to farmers and ranchers in Central Florida. Our goal is to help our clients make informed decisions which will improve both the environmental and economic sustainability of their operations by keeping them abreast of the latest agricultural research, providing access to the resources of the Land Grant University System, and by conducting community based classes and consultations.

To learn more about our programs, or to connect to your Extension Agent, please visit us online at

<https://extadmin.ifas.ufl.edu/cflag/>

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