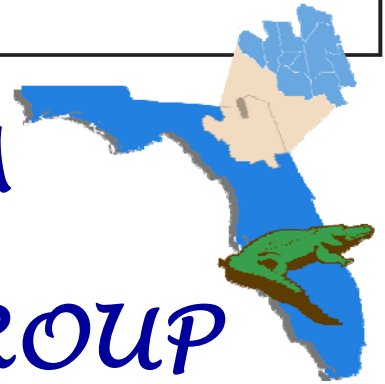


# NORTHEAST FLORIDA BEEF & FORAGE GROUP

**June 2012**

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Dear Producers,

Cattle prices are good, forage availability is limited. Although we have received some recent rains, for the most part, it has been dry. As of May 15, the U.S. Drought Monitor ([http://droughtmonitor.unl.edu/DM\\_southeast.htm](http://droughtmonitor.unl.edu/DM_southeast.htm)) lists much of Northeast Florida as having exceptional drought conditions. With this cattle/forage scenario, the management decisions you make now will determine whether or not you allow yourself the chance to be profitable in 2012. Members of the Northeast Florida Beef and Forage Group have developed a list of programs that can help you in making some of these decisions.

In April, we held the Northeast Florida Forage School and we're following it up with meetings on ag business, weed control, integrated pest management and marketing. I encourage you to contact your local extension agent if you are interested in attending these programs.

*Tim Wilson*, Northeast Florida Beef & Forage Group, Chair

## Sprayer Calibration

Barton Wilder, Agriculture/ Natural Resources Agent,  
Alachua County Extension

Sprayer calibration is a common task faced by many farmers and ranchers. Due to rising fuel and pesticide costs it is important to be as efficient as possible when applying herbicides. These steps will provide a quick and accurate way to calibrate most sprayer systems.

### Step 1: Nozzle catch test

The first step in sprayer calibration is the nozzle catch test. This is done by collecting the amount of spray solution from all nozzles for 15 seconds.

For example: If your ATV boom sprayer has 7 nozzles catch the output from one nozzle for 15 seconds.

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Let's say after 15 seconds the total output from you're the spray nozzle was 6.43 oz.. Since 15 seconds is ¼ minute, multiply 6.43 oz × 4 to get ounces per minute. You would get 25.7 oz per minute. However, you need gallons per minute (GPM). To get GPM divide 25.7 oz by 128 since there are 128 oz in 1 gallon. Dividing 25.7 oz by 128 results in GPM of 0.2 It is also important to check the uniformity of each nozzle before spraying. No nozzle should vary more than +/- 10%. For example, for a GPM of 0.2 any nozzle that outputs above 0.22 GPM or below 0.18 GPM should be replaced.

### **Step 2: Determining speed**

There is an easy formula for determining your speed in miles per hour (MPH)

$$\text{MPH} = \frac{\text{Distanced traveled (in feet)} \times 60}{\text{Time (seconds) to travel distance} \times 88}$$

For example: Using a tape measure or a measuring wheel lay out a determined distance. (The distance can be any length.) Then using a stop watch determine the time it takes you to cover the distance. For example, let's say it takes you 11.4 seconds to drive 50 ft on your ATV. Using the above formula, your speed would be:  $3.0 \text{ MPH} = \frac{50 \text{ ft} \times 60}{11.4 \text{ sec} \times 88}$

### **Step 3: Determine Sprayer Swath**

This step is the easiest. If you have a single nozzle sprayer, measure the spray swath as you go back and forth. For example, you determine your spray swath to be 12 feet. Convert feet into inches by multiplying by 12 and you get a swath of 144 inches. Make sure to always convert from feet to inches. If you have a boom sprayer the swath will be equal to the boom's nozzle spacing. For example: If your boom has 7 nozzles on 20 inch spacing then you swath would be 20 inches.



### **Step 4: Determining Gallons per Acre (GPA)**

This is the most important formula you will use in sprayer calibration.

$$\text{GPM} = \frac{\text{GPA} \times \text{MPH} \times \text{swath}}{5940}$$

Rearranging the equation you get

$$\text{GPA} = \frac{\text{GPM} \times 5940}{\text{MPH} \times \text{swath}}$$

From step 1 GPM = 0.2

From step 2 speed = 3 MPH

From step 3 swath = 20 inches

$$\text{GPA} = \frac{0.2 \times 5940}{3 \times 20}$$

$$\text{GPA} = 19.8 \approx 20 \text{ GPA}$$

### **Step 5: Determining acres per tank**

The formula for acres per tank is:

$$\text{Acres per tank} = \frac{\text{tank volume, gallons}}{\text{GPA}}$$

$$\text{For example: Acres per tank} = \frac{25 \text{ gallons}}{20}$$

$$\text{Acres per tank} = 1.25$$

### **Step 6: Determining amount of product per tank**

Pesticide amount per tank = (Acres per tank) × (pesticide rate)

For example: You want to apply the pesticide at 5 oz of product per acre.

$$\text{Pesticide amount per tank} = (1.25 \text{ acres per tank}) \times (5 \text{ oz per acre})$$

$$\text{Pesticide amount per tank} = 6.25 \text{ oz}$$

## What is Mad Cow Disease (BSE) ?

Basil Bactawar, Union County Extension Director/Agent, IFAS, Dr Max Irsik, DVM, University of Florida

Bovine Spongiform Encephalopathy (BSE) or 'Mad Cow Disease' is a progressive and degenerative fatal disease of the central nervous system of cattle. This condition in cattle results in changes in temperament, such as nervousness or aggression; abnormal posture; lack of coordination and difficulty in rising; decreased milk production; or loss of body weight despite continued appetite. Early in the clinical course of the disease, symptoms may be slight, undetectable or unrecognizable. Not all affected cattle display all signs of the disease.

BSE is a transmissible spongiform encephalopathy (TSE), which means the brain of an infected animal looks like sponge under microscopic examination. Other TSEs include Scrapie in sheep, chronic wasting disease in deer & elk, and Creutzfeldt-Jakob disease in humans. Presently, there is no test yet available to accurately diagnose BSE in live animals.



A Tentative diagnosis for BSE is based on clinical signs. A definitive diagnosis for BSE can only be confirmed by microscopic examination of an animal's brain.

In infected cattle, the prions or abnormal proteins often associated with BSE concentrate in tissues known as specified risk material (SRM), which include; the skull, brain, trigeminal ganglia (nerves attached to the brain), eyes, tonsils, spinal cord, dorsal root ganglia (nerves attached to the spinal cord) of cattle aged 30 months or older, and the distal ileum (portion of the small intestine) of cattle of all ages.

The most likely route of BSE transmission is through feed contaminated with the prion proteins associated with BSE. Cattle can develop BSE by eating as little as one milligram of infected tissue. In 1997, based on World Health Organization (WHO) recommendations, countries with a BSE outbreak should have implemented a feed ban prohibiting the feeding of rendered ruminant (cattle; sheep; goats; bison; deer; elk) protein products, including SRM, to other ruminants. In 1997, the United States Department of Agriculture (USDA) published a final rule prohibiting the feeding of rendered ruminant protein products. Specified risk materials are removed from all cattle at slaughter in order to insure no potential harmful products enter the human food chain. Removal of specified risk materials at slaughter is internationally recognized as the most effective means of insuring food safety and protecting public health.

## Tropical Soda Apple

Steve Gaul, Agriculture/ Natural Resources Agent, Nassau County Extension

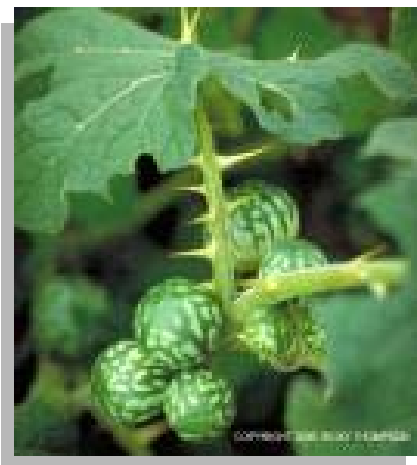
Tropical Soda Apple (*Solanum viarum* Dunal) is a noxious weed that can rapidly spread across a pasture. An infestation can significantly reduce the forage production and lead to lower stocking rates. Each plant produces thousands of viable seeds that can be spread by both livestock and wildlife. Plants

can be anywhere from three to six feet in height with thorny stems and leaves. The most distinguishing characteristic is the round mottled green to yellow fruits that are about one inch in diameter. Tropical Soda Apple (TSA) flowers and fruits throughout the year. New plants can be established by seed or sprouts from extensive root systems.

### Control Options

Prevention is one strategy to reduce the impact of

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this weed. Scout your pastures on a regular basis and remove plants before they become established. Clean equipment coming from infested pastures before entering weed free areas. Quarantine new livestock for one week before allowing them to graze on your pastures. This will prevent the introduction of new weed species, including TSA.

If you should develop sparse infestations they can be spot treated with either Milestone at 0.5 oz. / 2.5 gallons or GrazonNext at 0.5% solution. Cover the entire plant with the herbicide at least 3-4 hours

before rain. Revisit these areas to control potential seedlings and do not allow them to produce fruit. For larger, denser infestations you can broadcast the Milestone at 5 oz./ac or GrazonNext at 2 pints/acre. Higher rates of 7 oz. Milestone and 2.6 pints GrazonNext can be used to control new seedlings with their residual effects.

There is a natural biological control option for TSA. A beetle, native to South America has been released and found to be an effective control for sparse stands of TSA. You can contact the Department of Agriculture or your local extension agent for more details about the use of the beetle for TSA control.

Source: Tropical Soda Apple: Biology, Ecology, and Management of a Noxious Weed in Florida. Sellers, Ferrell, Mullahey, Hogue. EDIS. University of Florida.



## Hurricane Preparedness Tips for Livestock Producers

David Nistler, Agriculture/ Small Farm/ Natural Resource Agent, Clay County Extension

As we get set for our annual hurricane season it is important to keep in mind several storm preparedness and safety tips. While there are numerous aspects of the farm which need to be addressed prior and during a storm, this article will address livestock care.

There is much livestock owners can do to prepare for hurricane season. Then, if a hurricane threatens, you will be ready.

### Steps to Take

- ⇒ Make sure your animals are current on all vaccinations.
- ⇒ Several days before a storm is expected to make landfall, purchase additional feed, hay and water supplies.
- ⇒ Stock up on basic veterinary supplies and have restraint equipment ready for restraining injured animals that need veterinary assistance.
- ⇒ Prepare barns and pens by replacing loose boards or sheets of tin, or nailing them down.

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Northeast Florida Beef and Forage Group Presents

## Weed Management in Pastures

WEDNESDAY, JUNE 27, 2012

9:00AM—11:00AM

SONNY REGISTER FARM

12846 TURNER CEMETERY ROAD, SANDERSON, FL 32087

Registration 8:30am.  
\$5per person. Contact your  
local Extension agent to  
register by June 25, 2012.

### Basic Educational Topics:

- Weed Identification
- Managing Pasture for Livestock and Wildlife
- Herbicide Calculations
- Current Pricing
- Weed Control Demonstration

<b>Alachua County:</b>	<b>(352) 955-2402</b>
• Cindy Sanders & Barton Wilder	
<b>Baker County:</b>	<b>(904) 259-3520</b>
• Michael Davis	
<b>Bradford County:</b>	<b>(904) 966-6224</b>
• Tim Wilson	
<b>Clay County:</b>	<b>(904) 284-6355</b>
• David Nistler	
<b>Columbia County:</b>	<b>(386) 752-5384</b>
• Derek Barber	
<b>Duval County:</b>	<b>(904) 255-7450</b>
• Mike Sweat & Brad Burbaugh	
<b>Hamilton County:</b>	<b>(386) 792-1276</b>
• Keith Wynn	
<b>Madison County:</b>	<b>(850) 973-4138</b>
• Dan Fenneman	
<b>Nassau County:</b>	<b>(904) 879-1019</b>
• Steve Gaul	
<b>Suwannee County:</b>	<b>(386) 362-2771</b>
• Elena Toro	
<b>Union County:</b>	<b>(386) 496-2321</b>
• Basil Bactawar	

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- ⇒ Remove wire, fence posts and other loose items from barns, pens and pastures to reduce the chance of injury to livestock or structures.
- ⇒ Equipment should be placed under cover if possible.
- ⇒ Immediately before landfall, turn off all electrical power and water in the barn. Do not turn off the electricity to fences.
- ⇒ It is best to evacuate livestock well in advance of a storm. If this is not practical, make sure your trailer is safe for hauling and equipped with good floor mats, safe tires, a spare tire and working lights. Take along your extra feed, hay, water and veterinary supplies. Don't plan to return until the storm has passed and it is safe to do so.
- ⇒ If large livestock can not be evacuated, turn them loose in larger pastures or pens on high ground with some solid shelter or tall brush and large trees for cover. Livestock should never remain in a closed barn. If the barn is damaged by wind the animals could be injured or killed.
- ⇒ Turning livestock loose is not as safe as evacuating them, but it is preferable to leaving them in small pens or barns. Smaller animals



(sheep, goats, swine, and rabbits) can be brought indoors for protection if necessary.

- ⇒ Make sure feed and hay are well protected from wind and water. Move hay bales to high ground or stack them on posts or tires. Cover bales to prevent water damage.

### Things to Keep in Mind

- ⇒ Do not put yourself at risk by checking on livestock during a storm, but do check on them immediately after the storm. Most animals are used to being outside in bad weather and will simply need clean feed, a dry place to stand, and water to help them recover from stress.
- ⇒ If animals are injured, be ready to render first aid. Most producers are able to deal with minor injuries. If a more serious injury occurs contact your veterinarian.
- ⇒ Young animals are more susceptible to stress than older animals and may need more care. Also, bad weather often causes pregnant females near term to give birth, so watch for little ones.

## UF/ IFAS Beef Management Calendar

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### JUNE

- Last date for planting sorghum.
- Check mineral feeder, use at least 8% phosphorus in mineral and not over 2 ½ to 1 calcium to phosphorus ratio.
- Check pastures and hay field for spittlebugs, mole crickets and army worms. Treat if necessary; best month for mole cricket control.
- Check dust bags.
- Watch for evidence of pinkeye and treat.
- Utilize available veterinary services and diagnostic laboratories.
- Get heifers vaccinated for brucellosis if not already done.
- Pregnancy check cows.
- Update market information and plans.-Make first cutting of hay.
- Put bulls out June 1 for calves starting March 11.
- Re-implant calves at 90 to 120 days with growth stimulant.

### JULY

- Apply nitrogen to warm season pastures, if needed.
- Check mineral feeder.
- Check for army worms and mole crickets, and treat if necessary.
- Wean calves and cull cow herd.
- Watch for evidence of footrot and treat.
- Consider preconditioning calves before sale including vaccination for shipping fever and IBR at least 3 weeks before sale.
- Check dust bags.
- Update market information and plans.
- Revaccinate calves at weaning for blackleg.

### AUGUST

- Apply lime for fall and winter crops.
- Harvest Bahia grass seed.
- Check mineral feeder.
- Check for army worms, spittlebugs, and mole crickets, and treat if necessary.
- Check dust bags.
- Wean calves and cull cow herd.
- Watch for evidence of abortions.
- Observe animals regularly for signs of disease.
- If cattle grubs were found on cattle last winter or heel flies were observed in the pasture, treat for cattle grubs this month.
- Pregnancy test and cull open heifers from replacement herd



For the entire UF IFAS Beef Management Calendar go online to:  
<http://www.animal.ifas.ufl.edu/extension/beef/documents/BeefCal.pdf>

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**We're on the web:**  
<http://nfbfg.ifas.ufl.edu>

## Northeast Florida Beef & Forage Group Agents



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**Columbia County**

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**Baker County**

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