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PASTURE MANAGEMENT

Can I Afford to Nitrogen Fertilize Pastures?

Yes, but you will need to know how much to apply and when to apply it as the grass is growing. In the first weeks after planting your pastures, the grass roots are just coming out and the root system is not fully developed. Only a moderate amount of N is needed at this time (no more than 25-30 lb N/acre). Make sure you have a good weed control program in place to avoid use of fertilizer by weeds. When your grass have a full root system you can add more fertilizer. Putting the smaller amount at planting and a larger dose later in the summer will maximize yield and efficiency.

If deciding to fertilize an established stand and can only afford to do 1 application, the target is to do that application when you are more likely to get a response. Too early in the spring or late in summer are not good options because these are the tails of the growing season; a time when warm-season perennials are less productive because of shorter day length and cooler temperatures.

Test your soil and plant tissue if dealing with an established stand to make sure that all your other nutrients are available as plants work best and more efficient (more grass for your fertilizer buck) under balanced nutrition. With the current upward trends of N fertilizer prices and the prospects of N fertilizer options narrowing, the future of N supply may be dominated by the cheaper urea.

Dr. Yoana Newman
Extension Forage Specialist
ycnew@ufl.edu

Pasture Management: Getting the Most for the Least

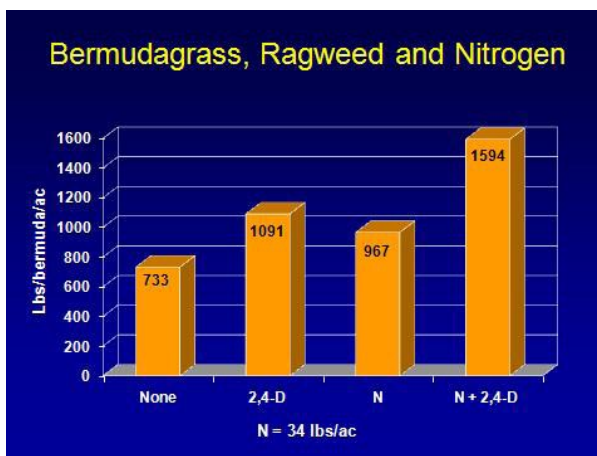
Agriculture commodity pricing has been on a rollercoaster for the last two years. Crop prices have achieved record high levels and acreage has soared. To counter the increased demand, fertilizer prices have doubled at least twice along with fuel prices. Not a big deal when growing \$5 per bushel, but this dramatically impacts the cattle producer since beef prices have hardly moved.

So how can we manage pastures to maximize productivity while minimizing cost?

Essentially, we have five options:

1. Spray herbicides
2. Fertilize
3. Spray and fertilize
4. Mow
5. Do nothing

Let's examine the cost benefit of each of these options.

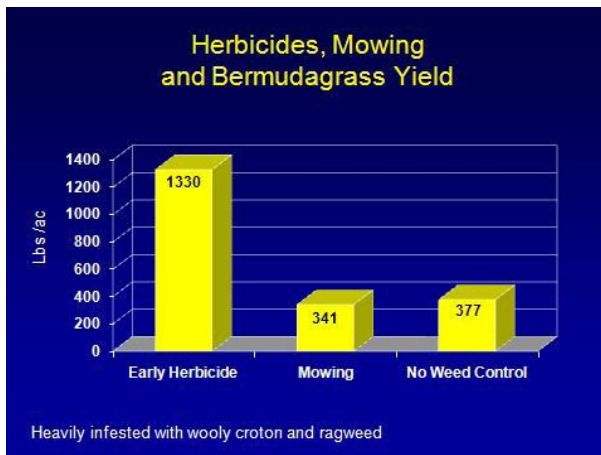


The chart (figure 1) shows that spraying 2,4-D (1 qt/A) or applying 34 lb of nitrogen will increase grass yield by 230 to 350 pounds per acre. Applying nitrogen and herbicide together more than doubles grass production. However, if fertilizing and spraying is too expensive, which should we choose? Depending on what source of fertilizer is used, 34 lb of nitrogen can cost between \$20 and \$40/A. On the other hand, a herbicide plus application cost will run between \$8 and \$25/A, depending on which herbicide and application rate is used. Considering that either of these will improve grass yield, a

herbicide application is likely to be the most cost effective.

Obviously we know that pastures will need fertilizer and lime to continue productive growth. So when do we do it? Weed control in pastures will generally not be required every year. So, clean up the weeds in year 1 and plan to start on a fertility program in years 2 and 3. This process will increase the competitiveness of the grass and, in turn, suppress weed growth. A healthy pasture is the best form of weed control. But we must remove the weeds present before this process can occur. Mowing is another technique commonly used by pasture managers. Depending on equipment size and driver skill, mowing can cost between \$8 and \$15/A. Is this money well spent?

Figure 2 indicates that mowing will generally not result in improved grass production. This is because mowing rarely kills weeds, but rather just sets them back and delays their regrowth. Therefore, mowing can cost almost as much as a herbicide application, but may not provide any weed control or improved grass production. With mowing it is important to remember that fuel no longer cost \$0.75/gal. At one time mowing was very inexpensive and any benefit from it was gain. But, we simply don't have the luxury of performing cheap mowing anymore.



Lastly, we can always choose to do nothing and let the grass and weeds compete. Like all ventures, low investment generally provides low return. This method can be profitable for producers that use very low stocking rates. But, normal herds will be hurt by this process and weight gain will be slow and body condition will suffer. With marginal investments, the amount of additional weight gain the animals will achieve can easily pay for itself. We are all aware that the best way to maximize grass production and cattle performance is to manage our pastures with proper fertility, mowing, and her-

bicide applications. But, if performing all these simultaneously is not affordable, we must choose a strategy to maximize our resources. It is likely that herbicide use is the most cost effective way to initially improve grass production. After weeds are controlled, a good fertility program will be needed. Lastly, large scale mowing will generally cost more than it returns. It may be necessary to limit mowing and reinvest the savings in other areas. Figure 1 shows the Influence of herbicide (1qt/A 2,4-D), nitrogen (34 lb/A of N), and herbicide plus nitrogen fertility on grass growth on a field infested with ragweed. Figure 2 shows the influence of herbicide application and mowing on grass growth on a field infested with ragweed and wooly croton.

Dr. Jason Ferrell, Extension Weed Specialist
jferrell@ufl.edu

Dr. Brent Sellers, Extension Agronomist
bsellers@ufl.edu

CLIMATE OUTLOOK

La Niña Impacts on Agriculture in the Southeast

La Niña conditions have abruptly returned to the Pacific Ocean. La Niña can be thought of as the opposite of El Niño and usually bring a warmer and drier spring season to Florida

Pasture and Hay

Both pasture for grazing and hay production fields are heavily influenced seasonal climate variability. See the chart for management practices.

Beef Cattle

Livestock production risks are also associated with seasonal climate variability. Drought and high temperatures affect both beef and dairy cattle. High returns from beef and milk production are more difficult during dry years (La Niña phase) in the Southeast because much of the production is based on grazing. High temperatures cause heat stress in cattle, reducing feeding, growth, and live births.

Climate variability is important in determining success in pasture and hay production and is another way in which climate affects livestock production. The table below shows typical seasonal climate variability in the Southeast.

Management	El Nino	La Nino
Establishment of Cool Season Grasses	Generally good for planting.	Tends to be too dry for good establishment.
Establishment of Warm Season Grasses	Little influence in summer plantings.	Tends to be too dry for good establishment in later winter plantings.
Fertilization	N and K may have to be repeated due to leaching.	Little response expected from plantings in winter-spring.
Grazing and Stocking Rates	Up to 10% more cattle can typically be stocked.	Stocking might be reduced by 12-15%.
Making Hay	Spring harvest abundant.	Spring cutting usually not worthwhile.
Forage Quality	May be higher due to cooler temperatures.	May be roughage quality due to persistently high temperatures.
Pasture Renovation	Desiccation of old growth may be difficult.	Desiccation of old growth easier due to dry conditions.
Nitrogen leaching and forage crops	Plant winter annuals	Sorghum and Millet are drought tolerant and uptake N

Climate forecast-based Beef Cattle Management

Management	Adaptation to Seasonal Climate Variability	
	El Niño (cooler-wet fall/winter)	La Niña (hot-dry winter/spring)
Stocking Rate	Stock 7-10% more cattle.	Stock 12-15% less cattle.
Plant Winter Forage	Planting likely to succeed and produce forage.	Less chance of establishment.
Fertilizer Winter Forage	Good response likely from grass.	Losses may be compounded.
Buy Winter Feed	Little advantage to purchasing ahead of winter.	Purchasing ahead of time is good strategy.

http://agroclimate.org/forecasts/current_climate_outlook.php

WEED CONTROL

Fireweed (*Urtica chamaedryoides*)

This winter annual species is commonly observed in north and central Florida pastures, particularly in bare ground areas as well as along tree lines where forage grasses are less dense.

Fireweed is particularly troublesome because it possesses stinging hairs that easily embed in the skin. Once exposed to the toxin, severe irritation can occur for several hours. Though generally avoided by

cattle, horses are more likely to browse fireweed and develop stress symptoms. These symptoms commonly manifest themselves as weight loss, or difficulty in swallowing and breathing for many days after consumption. In extreme cases, young horses have died after rolling in fireweed and becoming over-exposed to the toxins in the leaf hairs.

For effective control of fireweed the use of Milestone, Remedy, or Pasturegard herbicides is recommended. These herbicides can be applied any time of year to warm-season forage grasses. There are no grazing restrictions for beef cattle with these herbicides, but lactating dairy animals must be removed for 0 and 14 days with Milestone and Remedy, respectively, and one season for Pasturegard.



Mowing provides no benefit to control of this species. In fact, mowing has been found to result in smaller plants, but with many more stinging hairs. Additionally, the seed is surrounded by a sticky substance that can be transported by mower blades to areas not infested with this weed.

If not controlled, fireweed generally disappears in May with the onset of summer temperatures.

More information can be found at http://edis.ifas.ufl.edu/document_ag252

Thistle

Thistle stands in a pasture results in less forage production and grazing. A single thistle plant can produce at least 4,000 seeds, which increases the chance for higher thistle populations in the pasture the following year. For effective thistle control, management practices need to be conducted prior to flower formation. Even if thistles have not infested your pasture in the past, it is ideal that your pastures are scouted in late fall through mid-spring to ensure that thistles do not get out of control. New infestations are easier to manage than large-scale populations.

Mowing thistles can be an effective strategy, but timing is critical. Clipping thistles later in the spring (April to June) is quite effective when the flower stalk is typically hollow (late bolting stage). The plant is not likely to regrow or produce seed if mowed at this time. However, mowing when plants are in the rosette stage (prior to flower stalk formation – bolting) is not effective and plants will regrow. Therefore, mow only after rosettes have bolted, but before flowers are formed.

The use of herbicides are often the most flexible and affordable option for thistle control in pastures. However, like mowing, timing is an important factor for many herbicides. 2,4-D, Weed-



master, Remedy, Pasturegrad, or Milestone are highly effective on thistles, if applied early in the growing season. Thistles in the rosette state are highly sensitive to herbicides and are easily controlled. However, delaying the application until after bolting can have a dramatic impact on effectiveness. When applied at flowering, all herbicides provide less than 90% control, except for Milestone.

Scouting the pastures in late winter (January to March) will reveal the presence of thistles (rosette stage) and allow for an inexpensive herbicide application. If you wait until thistles flower, mowing and/or herbicide options are limited, less effective, and more expensive. Take the time to scout early, because it is the key to better and more economical thistle control.

More information can be found at http://edis.ifas.ufl.edu/document_ag253

LIVESTOCK and NATURAL RESOURCES MANAGEMENT

Beef Management for Spring calving herd

1. Line up AI or evaluate bulls prior to the start of breeding season
2. Perform breeding soundness evaluations on bulls
3. Continue providing magnesium in the mineral mix

Beef Management for Fall calving herd

1. Bulls out March 1 for calving season to start December 9
2. Remove bulls March 22 to end calving season January 1

Pre-weaning

1. Vaccinate calves for IBR, PI3, BVD, BRSV, Clostridial
2. Deworm

Goat Management

1. Begin kidding, check teat for milk flow, and identify kids
2. Separate singles from twins
3. If possible, pen individuals with kids
4. Feed does to maintain milk production
5. Watch for symptoms of parasite infestation
6. Vaccinate kids with CD-T at 6 weeks of age and again 2-4 weeks later

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PROGRAMS

Calendar Dates

<u>DATE</u>	<u>PROGRAM</u>	<u>LOCATION</u>	<u>TIME</u>
March 5	<u>Fertilizer Update</u>	Suwannee Co Extension	5:30 pm
March 7	<u>Wildlife Food Plot Field Day</u>	NFREC Live Oak	10:00 am
March 24	<u>Conservation Seminar</u>	Otter Springs Park Trenton	8:30 am
April 4	Toxic Round Up	Columbia Co Fairgrounds	9:00 am
April 17	<u>Goat Field Day</u>	FAMU	8:30 am
April 24-25 May 1-2	<u>Master Goat Program</u>	Crowley Museum Sarasota	8:00 am
April 28	Horse Management	Suwannee Co Extension	4:00 pm
April 29- May 1	<u>UF Beef Short Course</u>	Hilton @ UF	11:00 am