

GROWING BEEF



Iowa Beef Center's monthly newsletter
@ Iowa State University



June 2009 • Volume 1 Issue 11 • www.iowabeefcenter.org • beefcenter@iastate.edu

Feeding forages with the right fertilizer

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Pasture fertilization is often not a high priority for beef cattle producers. However, when considering how to carry cows on fewer acres, pasture fertilization may be one of the easiest and most economical solutions.

Grass-based pastures generally respond very efficiently to the first 40-50 pounds per acre (a) of nitrogen (N). Bluegrass will continue to respond to N applications up to 150-180 lbs/a annually, but at a decreasing rate of response.

Tall cool-season grasses (brome grass, orchardgrass, tall fescue) respond to N levels of 250 to more than 300 lbs/a, but at a decreasing rate of response. N recommendations for grass-based pastures are greater than the minimal amounts, but at still modest, yet efficient, rates:

Kentucky Bluegrass

- Early spring (March and April) 60-80 lbs/a
- Late spring (May to early June) (optional) additional 30-40 lbs/a
- And/or late summer (August to September) (optional) additional 30-40 lbs/a

Tall, Cool Season Grasses

- Early spring (March and April) 80-120 lbs/a
- Late spring (May to early June) (optional) extra 40-60 lbs/a
- And/or late summer (August to September) (optional) extra 40-60 lbs/a

Legume-grass Mixed Pastures

- If less than 1/3 legume, treat as a grass pasture
- If more than 1/3 legume, no nitrogen is recommended

Note for legume-grass mixed pastures: High or frequent applications of nitrogen (particularly spring nitrogen applications) will make the grass component of pastures more competitive and limit the amount of legumes in the mixture. To encourage a greater legume presence, use modest N rates and limit application to summer or fall; maintain optimum soil pH, P (phosphorus) and K (potassium) levels; improve grazing management, and consider oversowing legumes (interseeding or frostseeding).

Yield responses to P and K are not dramatic or consistent. However, there will be some improvement in yield when low P and K soil indexes are raised to an optimal level. Once this optimal level has been reached additional applications of P and K may not be needed for some time as these nutrients are not depleted in a grazing environment. Grass responds to nitrogen more efficiently when P and K levels are adequate.

Getting
to know
an IBC
beef
specialist



Denise Schwab

Counties served: Benton, Cedar, Clinton, Iowa, Jackson, Johnson, Jones, Linn, Muscatine, Poweshiek, Scott, Tama

What unique programs have you put on in your area?

Young Cattlemen project, a project where we try to identify young beef producers, provide educational activities specific to their needs, and encourage networking between members of the group and with established producers in the area. It has been fun to see how these folks share with each other and learn from experienced producers.

What do you enjoy most about your position?
Working with people, seeing their operations change over time, and bringing in the next generation.

What advice can you offer producers on managing their pasture this summer?

Subdivide pastures and provide rest time. Pastures can be very forgiving if you just give it time to rest and recuperate. The hardest thing is to take the first step and start building fences, but it has huge returns so just get started. Also, attend pasture walks and visit with others who rotationally graze to learn from their experience.

IOWA STATE UNIVERSITY
University Extension

Helping you become your best.

Ten ways to get more grass production from pasture

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1 Assess your pasture resources

Be realistic. Are your grasses and legumes suited for production when you need them? Most of our pastures grow best during the “cool season” and often do not produce well during hot or dry periods. If there are anticipated shortage periods, what strategies exist to make up the deficit – better pasture species, other pasture, supplementation, or reducing stocking?

2 Use nitrogen fertilizer to boost production

Grass-based pastures respond most quickly to nitrogen fertilizer, particularly the first 40 to 50 lbs/acre. To encourage more legume presence, use modest early spring N and defer some of the seasons total N to late-spring or late-summer. With high nitrogen costs many feel that pasture fertilization is too expensive. In reality the extra dry matter produced costs less than \$50 per ton, which is very cheap feed in the bioeconomy.

3 Conduct a soil test

Need Phosphorus (P) and Potassium (K)? Don't guess - soil test! With fertilizer costs rising, don't guess how much fertilizer to apply. Soil tests give you a better guide for applying the soil nutrients that you actually need for forage growth response. Grass and legume yield response to P and K is less noticeable compared to nitrogen (N). Adding more P and K as commercial fertilizer or manure to already fertile sites is not economical.

4 Add lime to your pasture

Lime improves soil pH. Grasses grow opti-

mally at pH ranges of 6.0 to 7.0. Legumes grow best at pH ranges of 6.5 to 7.0. Soil sample to a two- to three-inch depth for pH determination, and use the soil test for lime rate recommendations.

5 Consider adding legumes

Legumes such as clovers or alfalfa improve pasture nutritive value, distribution of growth during the summer months and provide nitrogen to grasses. Legumes can be added to existing pasture sods by frostseeding or interseeding. Frostseeding is broadcasting seed in February or early March in Iowa. Interseeding is done with a no-till drill later in the spring (March and April) or in late summer (August to very early September), if soil moisture conditions are suitable.

6 Start rotational grazing

Improved grazing management can give practical gains in forage and livestock productivity. Compared with a continuously and abusively grazed pasture, implementing grazing management along with fertility and other pasture management practices, productivity will be increased by 25 to 50% in the first year and up to 100% by year three. Plants need “rest” and time to recover from leaf removal so use of some kind of rotation grazing to maintain plant vigor and productivity is required for plant health.

7 Control the weeds

Dense forage stands, with a good fertility program, proper pH and grazing management, generally do not have a weed problem. Abused, poorly managed pastures will respond with increased yields when weed pressure is reduced. Herbicide treatments used in conjunction with improved fertility and grazing management are more successful.

8 Stretch limited pasture

When grass availability is limited (dry weather), stretch existing forage supplies by supplemental feeding with grain, hay or corn processing coproducts like corn gluten feed or distillers grains on pasture. If pasture is really short dry lotting the cow herd and feeding harvested feeds prevents permanent damage to the pasture stand. Early weaning or reducing stock rates are both methods of reducing the forage needs of the grazing herd. One means of reducing the stocking rate is to add more acres such as hay fields during the summer slump.

9 Appropriate turn out dates

Allowing the pasture plants a chance to get ahead before turn out in the spring can greatly improve carrying capacity. Tall cool season grasses should be at least four inches tall and preferably six before grazing is initiated in the spring. Blue grass should be a minimum of two inches. If one must turn out sooner make sure to use very low stocking rates so that the grass can take off. Secondly, if one allows for fall rest and root reserves to build up before winter dormancy, spring green up and early growth will be accelerated allowing earlier turn out.

10 Start over with a new seeding

The most drastic and costly pasture improvement alternative is to completely renovate the pasture. While ‘starting over’ allows you to make major changes, it often requires a few years for new seedings to become fully productive, and can leave you with low pasture production for a few years while the pasture is establishing. Risks with complete renovation are soil erosion and possible stand damage before seedlings become well established.

... and justice for all

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