

THE FORAGE PRO - AUGUST NEWSLETTER

When Should I Apply Nitrogen to my Pasture or Can I Even Afford To

As I travel around the state visiting with forage and livestock producers, I am constantly reminded of the tremendous opportunities that we have through improved management of our forage base. One of the areas of improved forage management which needs improvement is the area of soil fertility. Proper soil fertility is vital in helping improve forage yield, quality and promote a vigorous and healthy stand. Soil sampling is critical for effective soil fertility management as the results will help producers assess nutrient availability. As a part of improved soil fertility, regular scheduled nitrogen applications are critical for optimum growth and quality of grasses. For those who are interested in maximizing the productivity of their pasture, August is an excellent time to be adding another 50-75 units of nitrogen to their grass pastures. An application of nitrogen at this time will take advantage of the late Summer and early Fall growing conditions to obtain excellent yields of some of the highest quality pasture available in the entire growing season (table 1.) and offers an excellent opportunity to significantly reduce the winter hay feeding period. Most producers understand that nitrogen will promote plant growth at this time but don't realize that nitrogen will also greatly improve crude protein concentration of the forage as well. Also, the shortening of the day length and decreasing temperatures which Fall brings, will also increase the concentration of sugars in the grass plant (table 2.) thus improving forage quality. Applying nitrogen in early August allows producers to extend the grazing season for their livestock herd with high yields of quality grass forage and decrease their need for stored feed.

Table 1. Effect of application date on yield (lbs/acre) of tall fescue, 10 weeks after nitrogen application.

Application Date	--- Forage Yield---	
	No Nitrogen	Urea
Early August	786	1406
Mid August	741	1287
September	372	852

Table 2. Seasonal Changes in the Quality of Fescue.

	Spring	Summer	Fall
Sugars, %	9.5	8.5	19.0
Digestible Dry Matter %	69	66	74

One of producers concerns with the application of nitrogen during summer months is the volatilization of nitrogen. Volatilization of urea occurs when N in urea becomes a gas. In less than 3 days, 30% or more of urea's value can be lost through the action of urease, a soil microbe produced enzyme. However, results from University of Kentucky's research on **Agrotain** have shown dry matter yields of fescue fertilized with urea with **Agrotain** was 12% higher than fescue fertilized with urea without Agrotain.

Agrotain Nitrogen Stabilizer

- Prevents nitrogen loss caused by volatilization.
- Helps maximize yield and lower nitrogen costs.
- Is cost effective when used with surface applied N on pastures

With today's high cost of nitrogen fertilizer, many producers ask the question, "Can I afford to apply Nitrogen to my Pasture?" They are concerned whether nitrogen applications are cost affective. The answer is YES, even with today's high prices, nitrogen is an excellent investment. One pound of nitrogen per acre to grasslands will generate an average forage yield response of approximately 30 lbs of forage dry matter. However, it is imperative that we do a better job of managing our pastures to get the biggest bang for our dollar. The question should be "HOW CAN I AFFORD NOT TO APPLY NITROGEN TO MY PASTURES?"

Introducing TAKENA Orchardgrass

The Importance of Harvesting Grass Hay at the Proper Maturity

To get optimum animal performance whether that is conception rates, weight gain or milk production, it is imperative that the forages which the animals consume be high quality. One of the major factors in producing high quality grasses is making sure that the grass is being harvested at the proper stage of maturity. For first harvest grass hay, it is highly recommended that grasses be harvested at early to mid-boot stage to optimize quality and maintain yield. Table 3 illustrates the relationship between maturity and quality. As one can see from this data, drastic improvements in forage quality can be made by simply harvesting at the proper stage of maturity.

Table 3. Effect of Maturity on the Quality of Orchardgrass

Stage of Maturity	%CP	RFV
Mid Boot	20.5	106
Pre-Bloom	15.9	85

Full Bloom 12.1 77

Plots were planted in April of 1996, in Lafayette, IN and data was an average of 1997 and 1998.

Nitrogen was applied at a rate of 75 units of N each spring.

n animal performance. In this particular example, by simply prolonging the harvest for 3 weeks, there was a decrease in almost a full pound of live weight gain per animal per day. This adds up to significant financial losses over a year's time.

Table 4. Effect of Stage of Harvest of Fescue Hay on Quality and Animal Gains

Stage of Harvest	DMI		
	(lb./day)	%CP	lb. gain/day
Late Boot (May 3)	13.0	13.8	1.39
Early Bloom (May 14)	11.7	10.2	0.97
Early Milk (May 25)	8.6	7.6	0.42

University of Tenn. - Holstein heifers were used. Average starting weight was 500 lb.

Unfortunately, even in a good year, much of the 1st harvest grass hay which we harvest is beyond the mid boot stage due to the difficulty in getting a window of opportunity for harvest due to weather patterns. This is very important, as first harvest hay is typically 40 - 50% of the total annual production. As an industry, we have long promoted late maturing orchardgrass for mixtures with alfalfa but have tended to promote early maturing varieties for pasture and pure grass hay. The reason for this was that early maturing varieties tended to have the advantage in yield.

Introducing Takena Orchardgrass, a new late maturing ForagePro variety from Miles Farm Supply.

Takena has broken the late maturity, reduced yield correlation. **Takena** is 10 - 14 days later in maturity than most early maturing varieties, but has excellent forage yields. **Takena** has been trialed in multiple sites in Kentucky and is one of the top yielding varieties in the trials. By planting **Takena**, a producer is not only getting one of the top yielding varieties available on the market today, they are also getting a product which is late enough in maturity that it gives them the opportunity to harvest a level of quality forage that they have not been able to harvest in the past. Anyone who is considering planting Orchardgrass either for pasture, pure grass hay or as a mixture with alfalfa needs to seriously consider making **Takena** their variety of choice.

For Top Yields and Excellent Quality - Choose **Takena** Orchardgrass

Takena Yield Performance Update

Lexington, KY	Quicksand, KY	Princeton, KY
2002-2003 total	2002-2003 total	2003 data
Yield	Yield	Yield

Ranking

	(Tons DM/acre)		(Tons DM/acre)		(Tons DM/acre)
Takena	12.88	1	8.61	2	4.64
Mammoth 12.33	4		8.35	5	---
Hallmark 12.24	5		8.08	8	4.36
Haymate ----	--		8.33	6	4.23
Benchmark----	--		----	--	4.46



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