



Northern New York Agricultural Development Program

Grass Manure Management as Influenced by Species Fact Sheet

Cornell Professor of Agriculture Dr. Jerome H. Cherney is conducting research on the effect of manure and nitrogen fertilizer on three perennial grass species that are harvested on an intensive three-cut system and are popular with the dairy industry. A quick summary of the results of his research through 2003 appears below. Research continues on Northern New York farms in 2004.

Grasses studied:	tall fescue, reed canarygrass, orchardgrass
Applications tested:	no manure or N (nitrogen) 100+50+50 lbs. N 100+100+50 lbs. N 200+0+0 lbs. N split application of 40 wet tons of dairy manure split application of 40 wet tons of dairy manure + split application of 150 lbs of N (50+50+50) Note: pounds are for pounds of actual nitrogen applied
Application schedule:	1st application: at spring green-up 2nd application: after first harvest (55% fiber NDF) 3rd application: after second harvest (55% fiber NDF)

Results:

- Split application (100+50+50) of N produced higher yields than one-time spring application
- Yields from two applications (100+100) were no different from N split-applied 3x
- With split application of N, tall fescue yielded 1 ton/acre/year more than reedcanarygrass, averaged over three years. Tall fescue averaged 4.4 tons/acre/year with split-applied N.
- After three years of manure application, yields of 40 tons/acre are still considerably lower than those w/N fertilizer or manure + nitrogen.
- Split application of fertilizer or manure distributes the yield more evenly over the season. This result may not be desirable if the goal is to maximize the yield of the first two cuts to feed lactating cows.

For more information on forage grasses: Dr. Jerome H. Cherney, E.V. Baker Professor of Agriculture, Cornell University, 607-255-0945.
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