

## Glyphosate Application Timing in Glyphosate-Tolerant Alfalfa

2011

### Objectives

- Determine glyphosate treatment effects on tonnage, NDF, ADF, and protein.
- Investigate if a later application of glyphosate impacts stands in subsequent years.

### Study Description

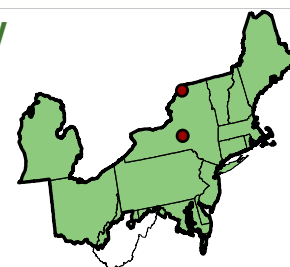
#### Study Facts:

2 locations, 20 ft x 50 ft plots, 4 replicates, year 1 of 3-year study, glyphosate applied at 1.05 lb a.e./acre

#### Factors:

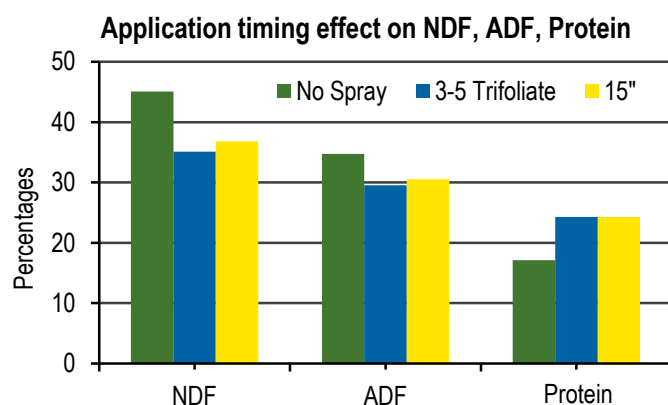
Varieties: Pioneer® varieties 54R01 (RR), 54R02 (RR)  
 Treatments: Non-treated  
 3-5 Trifoliolate (recommended timing)  
 15" (late application)

### Northeast Agronomy Research "Growing Value"

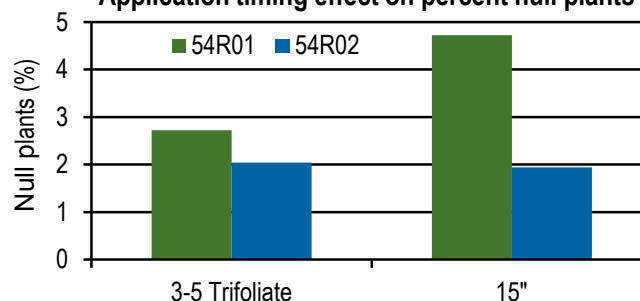


### Results

- Controlling weeds with glyphosate was associated with improved forage quality (NDF, ADF, and protein %) compared to the control. The highest overall quality was observed with the recommended application timing (3-5 trifoliolate).



#### Application timing effect on percent null plants



- Timely glyphosate application in Pioneer® brand alfalfa with the Genuity® Roundup Ready® trait is an effective stand establishment tool that provides excellent crop safety compared to other herbicide options.

Good late season stands with recommended application timing (left), stand thinning with late application (right) due to weed competition.



No Glyphosate  
Weedy Check

Glyphosate at 3-5 Trifoliolate  
Recommended Timing

Glyphosate at 15"  
Late Application,  
showing dead weeds

- Tonnage was not significantly different between 54R01 and 54R02 across treatments (data not shown).
- Null plant percentages for both varieties were under 3% when the glyphosate application was made at the 3-5 trifoliolate stage. Weed competition prior to treatment with the late application timing further reduced stands of 54R01.

2011 data are based on average of all comparisons made at two locations through Nov. 15, 2011. Multi-year and multi-location is a better predictor of future performance. Do not use these or any other data from a limited number of trials as a significant factor in product selection. Product responses are variable and subject to a variety of environmental, disease, and pest pressures. Individual results may vary. Contact a Pioneer sales representative for the latest and complete listing of traits and scores for each Pioneer® brand product.



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