

Plant Tuff Alfalfa Trial 2013-2015  
Hanson & Associates  
Lancaster, WI

**Objective:** To evaluate the effect of Plant Tuff Silicon Fertilizer on the growth, yield, and quality of alfalfa.

The alfalfa was harvested 4 times in 2015. Following each cutting plot yields were measured. Cumulative yields from the four cuttings were calculated for each treatment. Nutritional parameters were evaluated for the alfalfa following the fourth, and final, cutting.

**Location:** Lancaster, WI  
**Soil Type:** Palsgrove Silt Loam

**Planting Date:** 4/25/2013

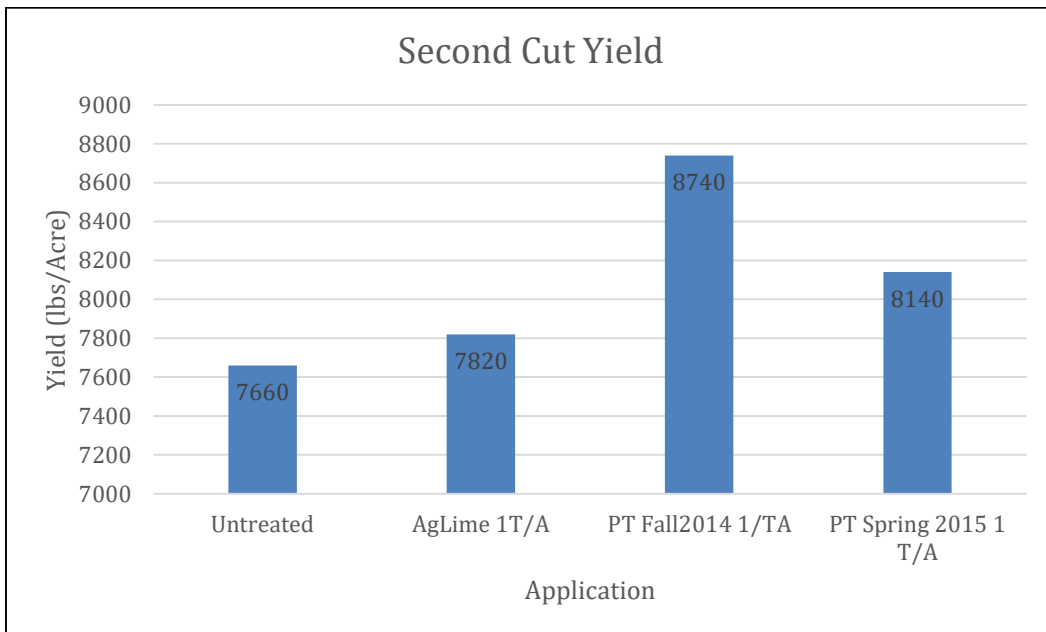
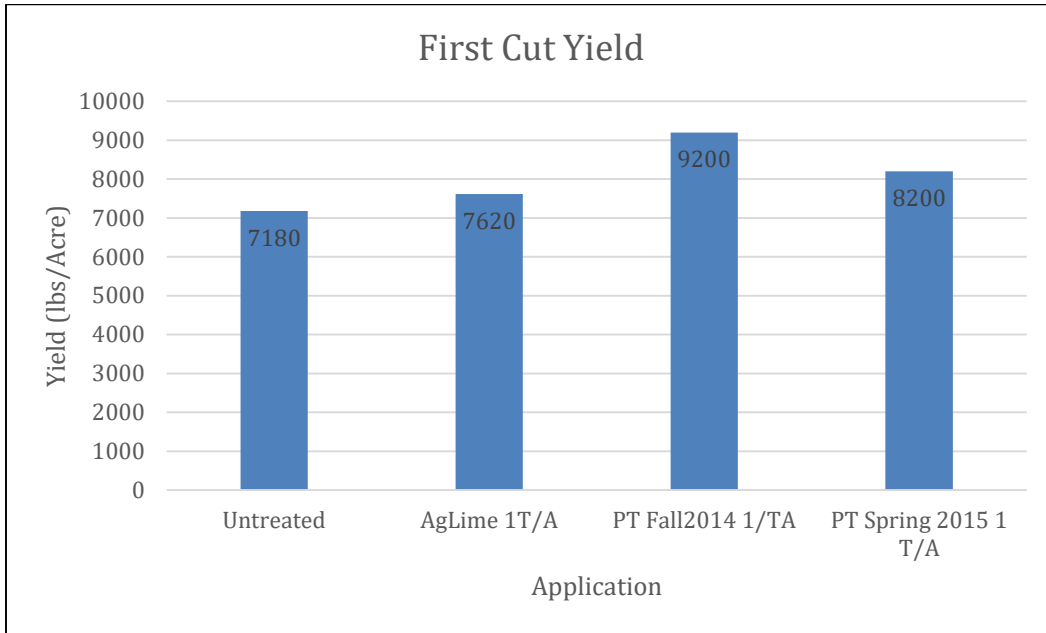
**Pre-Treatment**

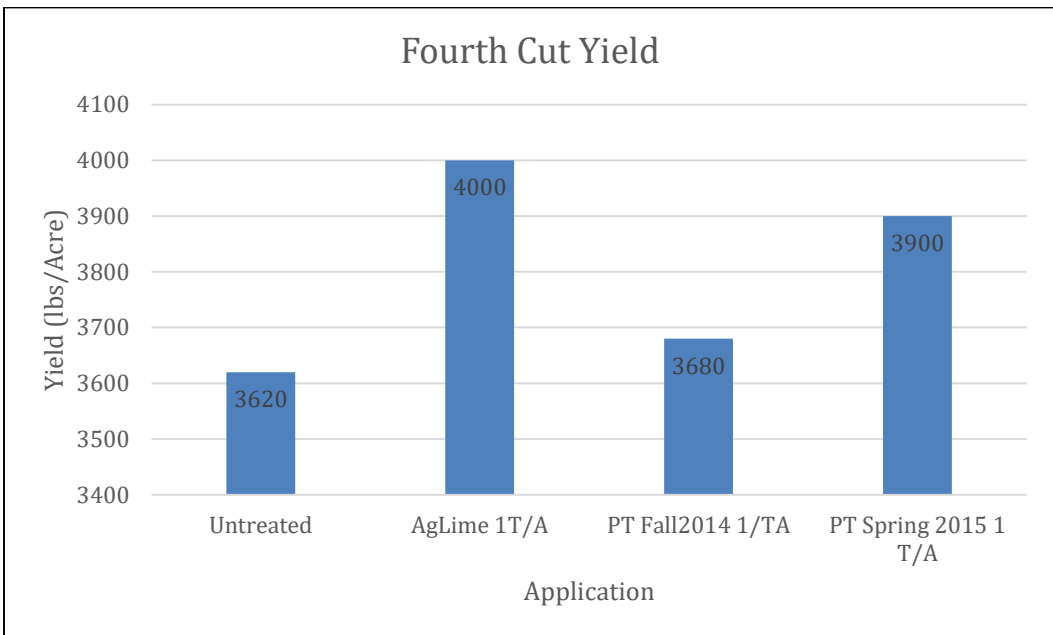
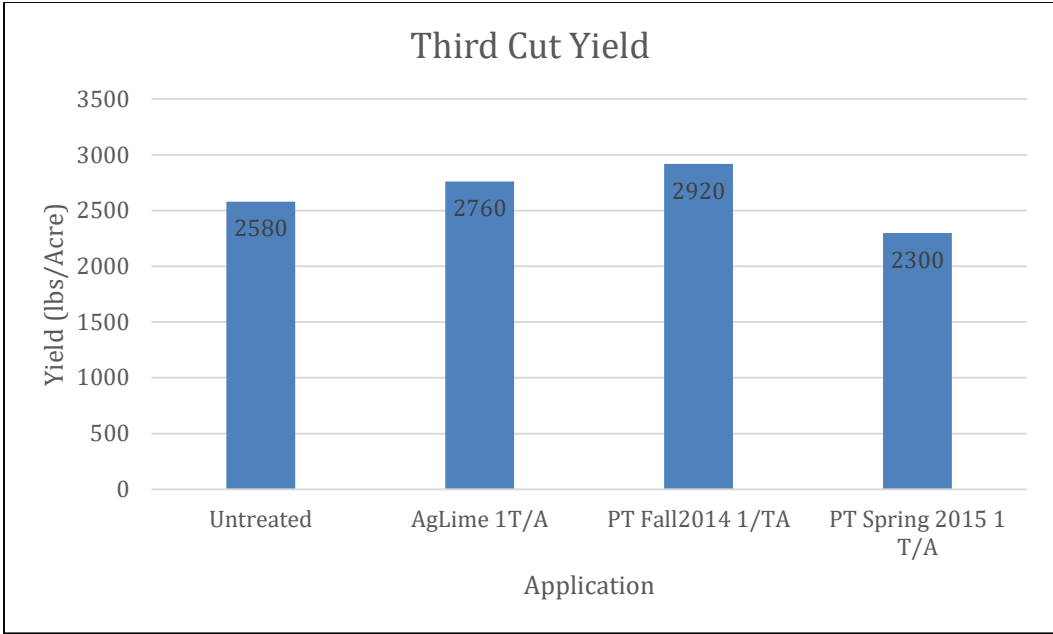
Si Average: 150 ppm  
Si Outlier: None  
Soil pH: 6.82  
Organic Matter: 1.8%

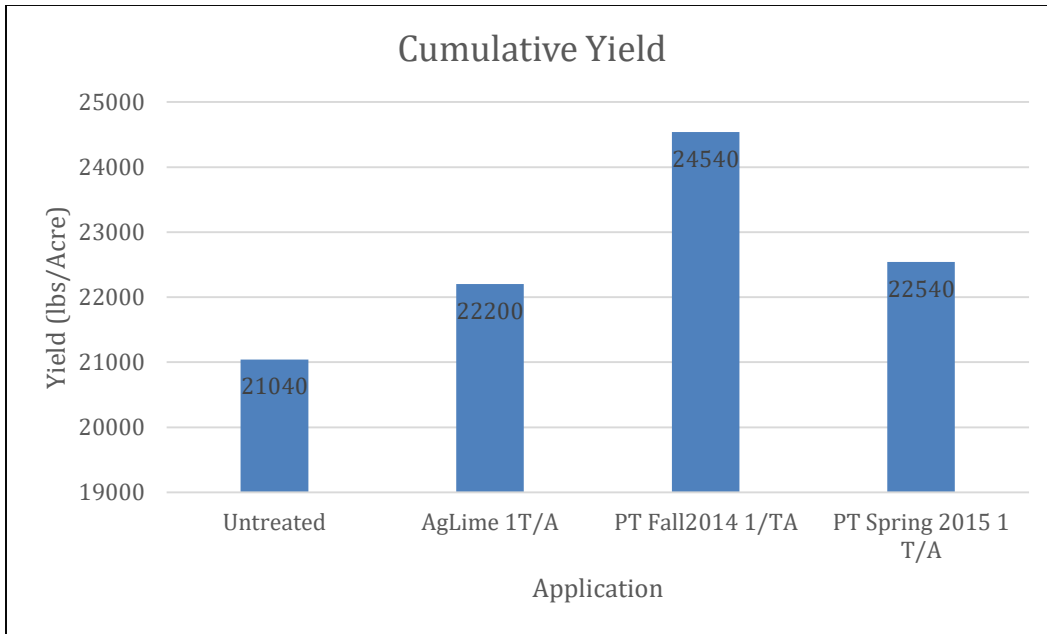
**Treatments:**

<b><u>Material</u></b>	<b><u>Rate</u></b>
Untreated Check	---0---
Ag Lime (Fall 2014)	1 T/A
Ag Lime (Fall 2014)	2 T/A
Plant Tuff (Fall 2014)	1 T/A
Plant Tuff (Fall 2014)	2 T/A
Plant Tuff (Fall 2014)	1 T/A
Plant Tuff (Spring 2015)	1 T/A
Plant Tuff (Fall 2014)	2 T/A
Plant Tuff (Spring 2015)	2 T/A
Plant Tuff (Spring 2015)	1 T/A
Plant Tuff (Spring 2015)	2 T/A

## Effect of Plant Tuff Applications on Alfalfa Yields







Treatment	CP	RUP	RDP	TDN	DM
Untreated Check	28.05	17.80	82.20	70.33	93.02
Aglime 1 T/A Fall	27.98	17.92	82.08	70.75	93.36
Plant Tuff 1 T/A Fall	28.66	16.81	83.19	71.37	93.51
Plant Tuff 2 T/A Fall	29.26	17.31	82.69	70.48	93.42
Plant Tuff 1 T/A Spring	29.10	16.48	83.52	71.27	93.22
Plant Tuff 2 T/A Spring	28.43	17.42	82.58	70.91	93.30

CP: Crude Protein

RUP: Rumen Undegradable Protein

RDP: Rumen Degraded Protein

TDN: Total Digestive Nutrient

DM: Dry Matter

## Results:

Fall and Spring applications of Plant Tuff Silicon Fertilizer at 1 T/A and 2 T/A rates increased alfalfa yields as compared to the untreated check and the Aglime treatments. Fall applications of Plant Tuff provided the greatest yield increases as compared to the untreated check and the Aglime treatments, as was expected. Cumulative annual yields from four alfalfa cuttings for 1 T/A of Plant Tuff yielded 10% more lbs./acre than the 1 T/A Aglime treatment. Yield improvements from Plant Tuff applied at 1 T/A or 2 T/A were not substantially different from one another.

Fall applications of Plant Tuff to established alfalfa were more effective than spring applications in this trial. This result was in-line with expectations.

The application of Plant Tuff at the rates tested, 1 T/A and 2 T/A, did not have a significant effect on any of the alfalfa nutritional parameters tested. Feed quality and feed palatability were not found to be affected by applications of Plant Tuff Silicon Fertilizer.