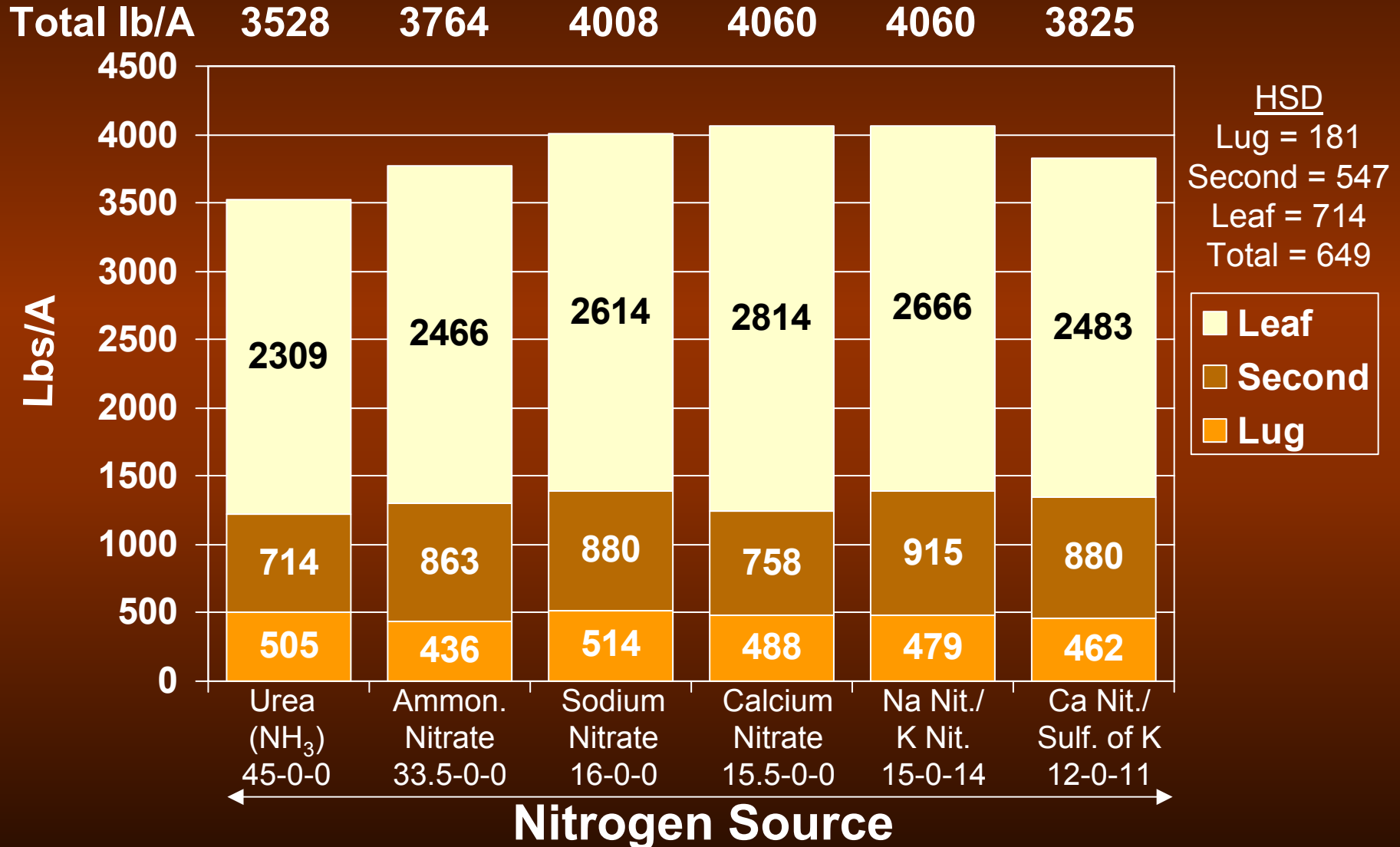


Nitrogen Source Study

Mark Hayden – McLean Co. - 2002



Effect of Nitrogen Sources on Soil pH and Ion Levels

Mark Hayden – McLean Co. - 2002

Treatment	P	K	Ca	Mg	Zn	pH	Buffer pH
Urea	147	293	2126	98	3.2	5.62	7.01
NH ₄ NO ₃	142	296	2038	102	3.1	5.35	6.95
NaNO ₃	127	256	1961	100	2.8	6.40	7.13
CaNO ₃	129	265	2594	97	2.8	5.51	7.02
NaNO ₃ /KNO ₃	126	420	2103	99	3.0	6.18	7.11
CaNO ₃ /sulf-of-K	128	472	2318	97	2.8	6.20	7.13
LSD (0.05)	27	79	308	15	0.3	0.75	0.11

Nitrogen Source Study

Mark Hayden – McLean Co. – 2002

Summary

- Row spacing: 40 in. Plant spacing: 30 in. Variety: KY 171
- Set: June 8, 2002 Topped: _____ Harvested: Sept. 9, 2002
- pH: 5.7 N: _____ ; P: 205 ; K: 502
- Treatments applied June 11, 2002

TRIAL SUMMARY:

N sources compared were Urea (NH_3 : 45-0-0), ammonium nitrate (33.5-0-0), sodium nitrate (16-0-0), calcium nitrate (15.5-0-0), sodium nitrate/potassium nitrate (15-0-14), and calcium nitrate/sulfate of potash (12-0-11).

Lug weight ranged from 436 to 514 lb/A and weight of seconds ranged from 714 to 915 lb/A with no significant differences among N sources.

Based on LSD mean separation procedures (less conservative than HSD), leaf yield from tobacco receiving urea (2309 lb/A) was significantly lower than leaf yield from calcium nitrate (2814 lb/A). Total yield from urea-treated tobacco (3528 lb/A) was also lower than tobacco treated with sodium nitrate, calcium nitrate, or 15-0-14.

Effect of Nitrogen Sources on Soil pH and Ion Levels

Mark Hayden – McLean Co. – 2002

Summary

- Nitrogen sources influenced soil pH with highest pH following NaNO_3 , $\text{NaNO}_3/\text{KNO}_3$, and $\text{CaNO}_3/\text{sulf-of-K}$ treatments (6.18-6.40) and lower pH following Urea, NH_4NO_3 , and CaNO_3 (5.35-5.62). Differences in ion levels correlated with N sources, with higher K levels following $\text{NaNO}_3/\text{KNO}_3$ and $\text{CaNO}_3/\text{sulf-of-K}$ treatments and higher Ca levels following CaNO_3 and $\text{CaNO}_3/\text{sulf-of-K}$ treatments. Zn levels were slightly higher following Urea treatments.