Increasing rates of nitrogen fertilizer beyond 150 lb/a can lower soil pH but does not necessarily increase yield. Burley tobacco fertilized with 1200 lb/a of nitrogen yielded significantly better than 450 lb/a, but was not significantly better than other treatments. Tobacco fertilized with 450 lb/a ammonium nitrate plus 714 lb/a of 14-0-14 (calcium nitrate plus potassium nitrate) yielded very close to that of 1200 lb/a of ammonium nitrate, but with 150 lb/a less nitrogen.

Nitrogen rate increase did not correlate well with Total TSNA, NNN, nitrate and nitrite levels but slight increases were common.
Fertility Trials (continued)

Nitrogen fertilizer sources applied at 250 lb/a produced similar results. However, the treatment of 450 ammonium nitrate down with 645 lb/a of calcium nitrate produces higher yields than either treatment that received urea. Total TSNA, NNN, nitrate and nitrite levels were not influenced by nitrogen sources.
Effects of Nitrogen Rate on Burley Yield Across 4 Locations

All plots received 450 lb/a Ammonium Nitrate Broadcast followed by the remainder of the nitrogen shortly after transplanting. AN = Ammonium Nitrate. 14-0-14 is a calcium/potassium nitrate mix. Locations = Fayette, Jackson, Madison & Shelby Counties. Nitrogen at 1200 lb/a produced significantly more yield than 450 lb/a. There were no other significant differences.
Effects of Nitrogen Rate on Burley Cured Leaf Chemistry Across 4 Locations

All plots received 450 lb/a Ammonium Nitrate Broadcast followed by the remainder of the nitrogen shortly after transplanting. AN = Ammonium Nitrate. 14-0-14 is a calcium/potassium nitrate mix. Nitrates could not be analyzed across locations due to treatment*location interactions.
Effects of Nitrogen Rate on Soil pH
Fayette Co. – John Mahan Farm

All plots received 450 lb/a Ammonium Nitrate Broadcast followed by the remainder of the nitrogen shortly after transplanting. AN = Ammonium Nitrate.
Effects of Nitrogen Rate on Burley Vigor
Fayette Co. – John Mahan Farm

All plots received 450 lb/a Ammonium Nitrate Broadcast followed by the remainder of the nitrogen shortly after transplanting. AN = Ammonium Nitrate.
Effects of Nitrogen Rate on Blue Mold
Fayette Co. – John Mahan Farm

All plots received 450 lb/a Ammonium Nitrate Broadcast followed by the remainder of the nitrogen shortly after transplanting. AN = Ammonium Nitrate Scale is 0 best – 10 worst.
Effects of Nitrogen Rate on Burley Yield

Fayette Co. – John Mahan Farm

<table>
<thead>
<tr>
<th>Yield lb/a</th>
<th>450 AN</th>
<th>600 AN</th>
<th>750 AN</th>
<th>900 AN</th>
<th>1050 AN</th>
<th>1200 AN</th>
<th>450 AN + 714 AN</th>
<th>LSD</th>
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<td>Flyings</td>
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<td>319</td>
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<td>Lugs</td>
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<td>1619</td>
<td>1468</td>
<td>1510</td>
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<td>239</td>
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<tr>
<td>Tips</td>
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<td>403</td>
<td>365</td>
<td>355</td>
<td>370</td>
<td>359</td>
<td>83</td>
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Yields were affected by Blue Mold

All plots received 450 lb/a Ammonium Nitrate Broadcast followed by the remainder of the nitrogen shortly after transplanting. AN = Ammonium Nitrate. 14-0-14 is a calcium/potassium nitrate mix.
Effects of Nitrogen Rate on Burley Cured Leaf Chemistry
Fayette Co. – John Mahan Farm

All plots received 450 lb/a Ammonium Nitrate Broadcast followed by the remainder of the nitrogen shortly after transplanting. AN = Ammonium Nitrate. 14-0-14 is a calcium/potassium nitrate mix.
Effects of Nitrogen Rate on Soil pH

Jackson Co. – Jerry Neeley Farm

All plots received 450 lb/a Ammonium Nitrate Broadcast followed by the remainder of the nitrogen shortly after transplanting. AN = Ammonium Nitrate.
Effects of Nitrogen Rate on Early Season Burley Vigor
Jackson Co. – Jerry Neeley Farm

All plots received 450 lb/a Ammonium Nitrate Broadcast followed by the remainder of the nitrogen shortly after transplanting. AN = Ammonium Nitrate, MS=mid-season, LS=late season.
Effects of Nitrogen Rate on Burley Yield

Jackson Co. – Jerry Neeley Farm

All plots received 450 lb/a Ammonium Nitrate Broadcast followed by the remainder of the nitrogen shortly after transplanting. AN = Ammonium Nitrate, 14-0-14 is a calcium/potassium nitrate mix

Variety = 14xL8
Effects of Nitrogen Rate on Burley Cured Leaf Chemistry
Jackson Co. – Jerry Neeley Farm

All plots received 450 lb/a Ammonium Nitrate Broadcast followed by the remainder of the nitrogen shortly after transplanting. AN = Ammonium Nitrate. 14-0-14 is a calcium/potassium nitrate mix.
Effects of Nitrogen Source on Burley Yield

Lincoln Co. – Dan Cooper Farm

<table>
<thead>
<tr>
<th>Variety = NC 5</th>
<th>Yield lb/a</th>
<th>LSD</th>
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<tbody>
<tr>
<td>556 U</td>
<td>1118</td>
<td>181</td>
</tr>
<tr>
<td>333 U</td>
<td>1106</td>
<td>102</td>
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<tr>
<td>750 AN</td>
<td>1117</td>
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<tr>
<td>450 AN</td>
<td>1036</td>
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<tr>
<td>450 AN 645 CN</td>
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<tr>
<td>450 AN 625 SN</td>
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<td>450 AN 714 14-0-14</td>
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</tbody>
</table>

Yields were affected by Blue Mold

Number = lb/a, U = Urea, AN = Ammonium Nitrate, CN=Calcium Nitrate, SN = Sodium Nitrate

14-0-14 is a calcium & potassium nitrate mix. Initial nitrogen was broadcast with addition sidedressed.
Effects of Nitrogen Rate on Burley Cured Leaf Chemistry

Lincoln Co. – Dan Cooper Farm

All plots received 450 lb/a Ammonium Nitrate Broadcast followed by the remainder of the nitrogen shortly after transplanting. AN = Ammonium Nitrate. 14-0-14 is a calcium/potassium nitrate mix.
Effects of Nitrogen Rate on Soil pH

Madison Co. – Gregg Harris Farm

Variety = 14xL8

All plots received 450 lb/a Ammonium Nitrate Broadcast followed by the remainder of the nitrogen shortly after transplanting. AN = Ammonium Nitrate.
Effects of Nitrogen Rate on Early Season Burley Vigor
Madison Co. – Gregg Harris Farm

Variety = 14xL8

All plots received 450 lb/a Ammonium Nitrate Broadcast followed by the remainder of the nitrogen shortly after transplanting. AN = Ammonium Nitrate.
Effects of Nitrogen Rate on Burley Yield

Madison Co. – Gregg Harris Farm

All plots received 450 lb/a Ammonium Nitrate Broadcast followed by the remainder of the nitrogen shortly after transplanting. AN = Ammonium Nitrate. 14-0-14 is a calcium/potassium nitrate mix.

<table>
<thead>
<tr>
<th>Yield lb/a</th>
<th>450 AN</th>
<th>600 AN</th>
<th>750 AN</th>
<th>900 AN</th>
<th>1050 AN</th>
<th>1200 AN</th>
<th>450 AN + 714</th>
<th>LSD</th>
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</table>

Variety = 14xL8
Variety = 14xL8

All plots received 450 lb/a Ammonium Nitrate Broadcast followed by the remainder of the nitrogen shortly after transplanting. AN = Ammonium Nitrate. 14-0-14 is a calcium/potassium nitrate mix.
Effects of Nitrogen Rate on Soil pH
Shelby Co. – Ray Tucker, Jr. Farm

Variety = KT200

All plots received 450 lb/a Ammonium Nitrate Broadcast followed by the remainder of the nitrogen shortly after transplanting. AN = Ammonium Nitrate.
Effects of Nitrogen Rate on Early Season Burley Vigor  
Shelby Co. – Ray Tucker, Jr. Farm

Variety = KT200

All plots received 450 lb/a Ammonium Nitrate Broadcast followed by the remainder of the nitrogen shortly after transplanting. AN = Ammonium Nitrate.
## Effects of Nitrogen Rate on Burley Yield

### Shelby Co. – Ray Tucker, Jr. Farm

<table>
<thead>
<tr>
<th>Yield lb/a</th>
<th>450 AN</th>
<th>600 AN</th>
<th>750 AN</th>
<th>900 AN</th>
<th>1050 AN</th>
<th>1200 AN</th>
<th>450 AN + 714</th>
<th>14-0-14</th>
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<tbody>
<tr>
<td></td>
<td>288</td>
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All plots received 450 lb/a Ammonium Nitrate Broadcast followed by the remainder of the nitrogen shortly after transplanting. AN = Ammonium Nitrate. LSD not available due to missing Value. However, adding 714 lb/a 14-0-14 significantly improved yield over 450 lb/a alone.
Effects of Nitrogen Rate on Burley Cured Leaf Chemistry
Shelby Co. – Ray Tucker, Jr. Farm

Variety = KT200

All plots received 450 lb/a Ammonium Nitrate Broadcast followed by the remainder of the nitrogen shortly after transplanting. AN = Ammonium Nitrate. 14-0-14 is a calcium/potassium nitrate mix.