### Alfalfa 1st Year Credit

**Note:** Use 40 lb N/acre credit if less than 6 inches of growth before tillage. Use upper end of range for spring seedings that are planted under the following spring; use low end for fall seedings.

| Phosphorus | K2O | N2O | N2O
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>66-75</td>
<td>55</td>
<td>25</td>
<td>15</td>
</tr>
<tr>
<td>75-85</td>
<td>65</td>
<td>35</td>
<td>25</td>
</tr>
<tr>
<td>85-95</td>
<td>75</td>
<td>45</td>
<td>35</td>
</tr>
<tr>
<td>95-105</td>
<td>85</td>
<td>55</td>
<td>45</td>
</tr>
<tr>
<td>105-110</td>
<td>95</td>
<td>65</td>
<td>55</td>
</tr>
<tr>
<td>110-120</td>
<td>100</td>
<td>70</td>
<td>65</td>
</tr>
</tbody>
</table>

**In the 2nd cropping year,**

**Following a fair or good stand on a fine/medium textured soil, take a 50 lb N/acre credit.**

**Red Clover, Birdsfoot Trefoil:** 80% of alfalfa credit for similar stands.

### Green Manure

**Alfalfa 60-100 lb N/acre**

**Sweet Clover 80-120 lb N/acre**

**Field Crops**

**Soybean 20 lb N/acre**

**Pea, Snap or Lima Bean 20 lb N/acre**

### Corn Nitrogen Guidelines

**SOYBEAN nutrient recommendations**

**CORN nutrient recommendations**

**LEGUME nitrogen credits**

---

### Corn N : N2O Price Ratio

<table>
<thead>
<tr>
<th>Sol (bu/acre)</th>
<th>0.05</th>
<th>0.10</th>
<th>0.15</th>
<th>0.20</th>
</tr>
</thead>
<tbody>
<tr>
<td>N2O</td>
<td>190</td>
<td>165</td>
<td>135</td>
<td>135</td>
</tr>
<tr>
<td>N2O</td>
<td>170</td>
<td>155</td>
<td>130</td>
<td>115</td>
</tr>
<tr>
<td>N2O</td>
<td>145</td>
<td>125</td>
<td>105</td>
<td>85</td>
</tr>
<tr>
<td>N2O</td>
<td>110</td>
<td>85</td>
<td>65</td>
<td>70</td>
</tr>
<tr>
<td>N2O</td>
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<td>135</td>
<td>115</td>
<td>95</td>
<td>65</td>
</tr>
<tr>
<td>N2O</td>
<td>155</td>
<td>135</td>
<td>115</td>
<td>70</td>
</tr>
<tr>
<td>N2O</td>
<td>200</td>
<td>185</td>
<td>165</td>
<td>150</td>
</tr>
</tbody>
</table>

### ADDITIONAL GUIDELINES:

- **For maximum sillage yield, use 0.05 price ratio.** To adjust rates for sillage, use price ratio that reflects typical prices for N and grain.
- **If >50% residue at planting, use upper end of range.**
- **If all 20 lb N/acre as starter may be used.**
- **For leached (medium and fine-textured) soils with >10% soil organic matter (OM), use low end of range.**
- **For all soils with <2% OM, use OM end of range.**
- **For sandy (coarse-textured) soils with <2% OM, use high end of range; 2-10% OM, use mid end of range; 10-20% OM, use non-irrigated guidelines—regardless of irrigation status; >20% OM, apply 80 lb N/acre.**
- **When corn follows small grains on leasland, use the mid end of range.**
- **When irrigated or drained, use rates for high yield potential soils.**
- **If potential for carry-over (residual) N, use low end of range or use the high end and subtract preplant soil nitrate test (PPMT) credits.**

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### ALFALFA nutrient recommendations

**Nurse Crops:**

Where barley or oats are seeded with a forage legume, eliminate or reduce N for the small grain by 50%

**Forage Crops:**

Where an alfalfa stand is to be maintained for more than three years, increase the annual top-dressed K2O by 20%.

Apply 30 lb N/acre in the seeding year if grown on soils with less than 2% organic matter.
### Fertilizer Analysis & Conversions

#### Nutrient Fast Facts

**Nutrient Management Facts:** A summary of University of Wisconsin recommendations. For more information, see the UWEX Nutrient Management Fast Facts publication. Use this information for field vegetable and fruit crops.

#### Manure Information

**Estimated Available Nutrient Content**

<table>
<thead>
<tr>
<th>Nutrient</th>
<th>1st Year</th>
<th>2nd Year</th>
<th>3rd Year</th>
<th>4th Year</th>
<th>5th Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrogen</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Phosphorus</td>
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<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td>Potassium</td>
<td>12</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

#### Conversion Factors

- 1 acre = 43,560 square feet
- 1 ton = 2,000 pounds
- 1 bushel = 9.31 gallons
- 1 gallon = 4 quarts
- 1 acre-foot = 326,080 cubic feet

#### Application Rates

- **Ammonium nitrate:** 43.560 lb/acre
- **Ammonium sulfate:** 6.0 lb/acre
- **Calcium nitrate:** 15.0 lb/acre
- **Urea:** 48.0 lb/acre

#### Calculating Acres Harvested

- **Example with shelled corn harvested by combine:**
  - 209 bu of corn ÷ 1.10 acres = 190 bu/acre

#### Soil pH Liming Recommendations

1. Lime should be applied and incorporated at least 6 to 12 months prior to planting an acid sensitive crop such as alfalfa.
2. Lime recommendations are made using the target pH for the most acid sensitive crop in a 4-year rotation.
3. Application rates for lime should never exceed 12 ton/acre (18 ton/acre for potatoes). The minimum application rate is 1 ton/acre on sandy soils with $<15\%$ OM; all other soils 2 ton/acre.
4. No additional lime should be applied until the most recent application has had 2-3 years to equilibrate with the soil.

#### Planting & Harvest Information

- **Row Lengths:** 26'1", 18'1", 17.5'6", 16'1", 1.6'9", 1.9'3"

#### Nutrients Removed by Crop at Harvest

- **Alfalfa:** 13.6 lb
- **Barley:** 0.40 lb
- **Buckwheat:** 0.35 lb
- **Corn:** 0.38 lb
- **Potato:** 0.32 lb
- **Oats:** 0.29 lb
- **Radish:** 0.27 lb
- **Soybeans:** 0.26 lb
- **Wheat:** 0.24 lb

### Calculating Acres Harvested

- **Example with shelled corn harvested by combine:**
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#### Calculating Acres Harvested

- **Example with shelled corn harvested by combine:**
  - 209 bu of corn ÷ 1.10 acres = 190 bu/acre

### SOIL pH Liming Recommendations

- **Crop**
  - **Alfalfa:** 7.0
  - **Barley:** 6.8
  - **Buckwheat:** 6.3
  - **Potato:** 6.3
  - **Oats:** 6.0
  - **Radish:** 6.0
  - **Soybean:** 6.0
  - **Wheat:** 6.0