



Nitrogen Guidelines for Corn in Wisconsin

N:Corn Price Ratio (see other side)

| SOIL | PREVIOUS CROP | 0.05 | 0.10 | 0.15 | 0.20 |
|--|--|---|---------------------------|---------------------------|---------------------------|
| | | LBS N/ACRE (total to apply) ³ | | | |
| high/very high yield potential soils | Corn , Forage legumes, Legume vegetables, Green manures ⁴ | 135-----190 ² 165 ¹ | 120-----155 135 | 100-----135 120 | 90-----120 105 |
| | Soybean , Small grains ⁵ | 110-----160 140 | 100-----130 115 | 85-----115 100 | 70-----100 90 |
| medium/low yield potential soils | Corn , Forage legumes, Legume vegetables, Green manures ⁴ | 100-----140 120 | 90-----120 105 | 85-----110 95 | 80-----100 90 |
| | Soybean , Small grains ⁵ | 75-----110 90 | 45-----70 60 | 40-----60 50 | 35-----55 45 |
| sands/ loamy sands | Irrigated— All crops ⁴ | 200-----230 215 | 190-----220 205 | 180-----210 195 | 175-----200 190 |
| | Non-irrigated— All crops ⁴ | 100-----140 120 | 90-----120 105 | 85-----110 95 | 80-----100 90 |

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¹ Maximum return to N (MRTN) rate. ² Range within \$1/acre of MRTN rate. ³ Includes N in starter. ⁴ Subtract N credits for forage legumes, legume vegetables, animal manures, green manures. ⁵ Subtract N credits for animal manures and second year forage legumes.

The University of Wisconsin's nitrogen (N) fertilizer guidelines for corn have changed. The new approach allows growers to determine N application rates that will provide maximum economic returns based on the cost of N and an anticipated price for corn. The N rate guidelines also provide a range of profitable N rates that are within \$1.00/acre of the maximum return rate.

ADDITIONAL GUIDELINES

- For max. silage yield, use N rate for 0.05 price ratio. To adjust rates for silage, use price ratio that reflects typical prices for N and grain.
- If >50% residue at planting, use upper end of range.
- If all N is from organic sources, use top end of range. Plus, up to 20 lb N/acre as starter may be used.
- For medium & fine-textured soils with >10% soil organic matter, use low end of range; <2% OM, use high end of range.
- For coarse-textured, medium yield potential soils with <2% OM, use high end of range; >2% OM, use mid to low end of range.
- When corn follows small grains on medium & fine-textured soils, use the mid to low end of range.
- For irrigated, medium yield potential soils, 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 (PPNT) credits.

N:Corn Price Ratios

| Price of N ¹ \$/lb N | Price of Corn (\$/bu corn) | | | | | | |
|------------------------------------|----------------------------|------|------|------|------|------|------|
| | 1.80 | 2.00 | 2.20 | 2.40 | 2.60 | 2.80 | 3.00 |
| 0.24 | 0.13 | 0.12 | 0.11 | 0.10 | 0.09 | 0.09 | 0.08 |
| 0.26 | 0.14 | 0.13 | 0.12 | 0.11 | 0.10 | 0.09 | 0.09 |
| 0.28 | 0.16 | 0.14 | 0.13 | 0.12 | 0.11 | 0.10 | 0.09 |
| 0.30 | 0.17 | 0.15 | 0.14 | 0.13 | 0.12 | 0.11 | 0.10 |
| 0.32 | 0.18 | 0.16 | 0.15 | 0.13 | 0.12 | 0.11 | 0.11 |
| 0.34 | 0.19 | 0.17 | 0.15 | 0.14 | 0.13 | 0.12 | 0.11 |
| 0.36 | 0.20 | 0.18 | 0.16 | 0.15 | 0.14 | 0.13 | 0.12 |
| 0.38 | 0.21 | 0.19 | 0.17 | 0.16 | 0.15 | 0.14 | 0.13 |
| 0.40 | 0.22 | 0.20 | 0.18 | 0.17 | 0.15 | 0.14 | 0.13 |
| 0.42 | 0.23 | 0.21 | 0.19 | 0.18 | 0.16 | 0.15 | 0.14 |
| 0.44 | 0.24 | 0.22 | 0.20 | 0.18 | 0.17 | 0.16 | 0.15 |

¹ Price of N = [\$/ton fertilizer x (100 / % N in fertilizer)] / 2000



This publication is available from the Nutrient and Pest Management (NPM) Program. website (ipcm.wisc.edu); phone (608) 265-2660; email (npm@hort.wisc.edu).

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