Nitrogen Source	Units		conversion	lbs. N/acre	
	example	your result		e.g.	your result
Soil Nitrate-Nitrogen (NO_3^--N): • The amount of residual soil nitrate-nitrogen can vary considerably depending on the soil type, irrigation efficiency, fertility program and plant uptake of previous crop. A conversion factor of 2.0 is used for a 0 – 6"soil sample depth to convert ppm N to lbs./ac.	7 ppm		Multiply by 2.0 to get lbs. N/ac.	14.0	
Estimated Nitrogen Release (ENR) from the mineralization of Soil Organic Matter (SOM): • About 15 – 25 lbs. of N/acre/yr. is mineralized from each % of SOM	1 % SOM		Assume 20 lbs. of N is mineralized/ac	20.0	
Irrigation Water Nitrate-Nitrogen (NO_3^--N): • Typically low levels are found in most irrigation waters. For this example, 2.5 ac-ft of irrigation water is used.	2 ppm		Multiply by 2.72 to get lbs. N/ac-ft (2.5 ac-ft used)	13.6	
Manure N credits for the first year after application: • Moisture content can be 10 – 50% of the total weight and N content is about 1.5 – 2.0% on a dry weight basis. Approximately 30 – 70% of the N is made available to the crop during the first year.	5.0 tons/ac. @ 30% moisture & 1.5% N		Assume 45% of the total N is available during the first year	47.25	
Legume N credits from previous crop: • About 25 – 100 lbs. of N/ac. can be provided by the legume crop (i.e., pounds of legume crop residue/ac. and crop quality determines the amount of N made available)	≈ 30 lbs. of N/ac. (low crop residues)			30.0	
Total Available Nitrogen per acre =				124.85	

Crop: Corn Silage; **Yield:** 20 tons/acre; **N requirement:** 160 lbs./acre (Ref. Crop Nutrient Uptake Tool @ http://npk.nrcs.usda.gov/)

Crop N Requirement (160.0 lbs./ac.) – Total Available N (124.85 lbs./ac) = **35.15 lbs. of N/ac. needed as fertilizer**

Fertilizer used: Urea ($CO(NH_2)_2$; 45 – 46% N)

Cost/lb. of N:	Enter your Cost/lb. of N:	Note: All N sources should be split-applied in order to increase N uptake efficiency. It is recommended that the producer take soil & petiole/leaf samples in order to monitor the effectiveness of their nutrient management program and to modify it as needed.
➢ $500/ton of Urea ➢ 46% N = 920 lbs. of actual N/ton of Urea ➢ $500/920 = $0.54/lb. of N		

Remember to use realistic yield goals when developing crop N requirements.

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Agronomy Tech Note 76 (http://www.nm.nrcs.usda.gov/technical/handbooks/iwm/nmiwm.html)