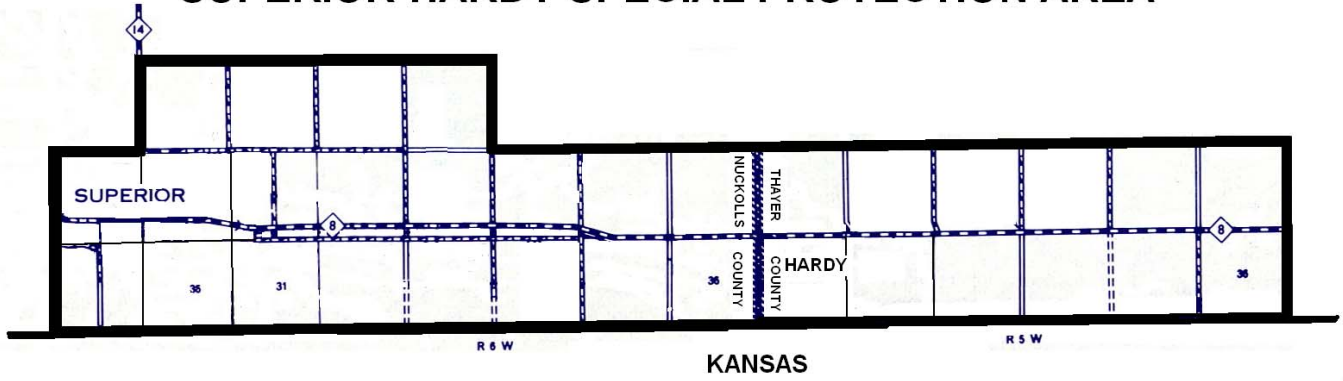


SUPERIOR-HARDY SPECIAL PROTECTION AREA



SUPERIOR-HARDY WATER QUALITY SUB-AREA

PHASE 2

- **All operators must attend** nitrogen and or irrigation management training workshops every four years.
- Fall & Winter applications of commercial N fertilizer are prohibited **prior to March 1st** or row crop ground for the ensuing year.
- Each operator is **required to take soil samples from all** planned corn or milo fields, (**irrigated tracts 5 acres or larger and dryland tracts 10 acres or larger**) which they farm **prior to spring applying N fertilizer**. Rates to be applied to these fields shall not exceed the UNL recommendations.
- Irrigation scheduling will re required on **all irrigated fields that are 5 acres or greater**.
- The annual reporting of operator's field data will be required for all fields, **that meet the required acreage. Due December 31st**, send to Little Blue NRD.

NITROGEN TABLES for CORN and GRAIN SORGHUM

Table 1. Nitrogen Fertilizer Suggestions for Corn

| Soil Organic Matter (%) | Residual Nitrate - N | | Expected Yield (bu/acre) | | | | | | | | | |
|-------------------------|----------------------|--------------|--------------------------|----|-----|-----|-----|-----|-----|-----|-----|-----|
| | ppm (avg) | lb/acre 3 ft | 60 | 80 | 100 | 120 | 140 | 160 | 180 | 200 | 220 | 240 |
| 3 | 3 | 32 | 60 | 75 | 90 | 105 | 120 | 135 | 150 | 165 | 185 | 200 |
| | 6 | 65 | 35 | 50 | 65 | 80 | 95 | 110 | 125 | 145 | 160 | 175 |
| | 9 | 97 | 0 | 25 | 40 | 55 | 70 | 90 | 105 | 120 | 135 | 150 |
| | 12 | 130 | | 0 | 15 | 35 | 50 | 65 | 80 | 95 | 110 | 125 |
| | 15 | 162 | | | 0 | 0 | 25 | 40 | 55 | 70 | 85 | 100 |
| | 18 | 194 | | | | | 0 | 15 | 30 | 45 | 65 | 80 |
| | 21 | 227 | | | | | | 0 | 0 | 25 | 40 | 55 |
| | 24 | 259 | | | | | | | | 0 | 15 | 30 |
| | 27 | 292 | | | | | | | | | 0 | 0 |
| 2 | 3 | 32 | 65 | 85 | 105 | 120 | 140 | 160 | 175 | 195 | 215 | 230 |
| | 6 | 65 | 40 | 60 | 80 | 95 | 115 | 135 | 155 | 170 | 190 | 210 |
| | 9 | 97 | 20 | 35 | 55 | 75 | 90 | 110 | 130 | 145 | 165 | 185 |
| | 12 | 130 | 0 | 15 | 30 | 50 | 70 | 85 | 105 | 125 | 140 | 160 |
| | 15 | 162 | | 0 | 0 | 25 | 45 | 60 | 80 | 100 | 115 | 135 |
| | 18 | 194 | | | | 0 | 20 | 40 | 55 | 75 | 95 | 110 |
| | 21 | 227 | | | | | 0 | 15 | 35 | 50 | 70 | 90 |
| | 24 | 259 | | | | | | 0 | 0 | 25 | 45 | 65 |
| | 27 | 292 | | | | | | | | 0 | 20 | 40 |
| 1 | 3 | 32 | 75 | 95 | 115 | 140 | 160 | 180 | 200 | 225 | 245 | 265 |
| | 6 | 65 | 50 | 70 | 95 | 115 | 135 | 155 | 180 | 200 | 220 | 240 |
| | 9 | 97 | 25 | 50 | 70 | 90 | 110 | 135 | 155 | 175 | 195 | 215 |
| | 12 | 130 | 0 | 25 | 45 | 65 | 85 | 110 | 130 | 150 | 170 | 195 |
| | 15 | 162 | | 0 | 20 | 40 | 65 | 85 | 105 | 125 | 150 | 170 |
| | 18 | 194 | | | 0 | 20 | 40 | 60 | 80 | 105 | 125 | 145 |
| | 21 | 227 | | | | 0 | 15 | 35 | 60 | 80 | 100 | 120 |
| | 24 | 259 | | | | | 0 | 15 | 35 | 55 | 75 | 95 |
| | 27 | 292 | | | | | | 0 | 0 | 30 | 50 | 75 |

Table 2. Nitrogen Fertilizer Suggestions for Grain Sorghum

| Soil Organic Matter (%) | Residual Nitrate - N | | Expected Yield (bu/acre) | | | | | | | | |
|-------------------------|----------------------|--------------|--------------------------|----|-----|-----|-----|-----|-----|-----|-----|
| | ppm (avg) | lb/acre 3 ft | 40 | 60 | 80 | 100 | 120 | 140 | 160 | 180 | 200 |
| 3 | 3 | 32 | 15 | 35 | 60 | 80 | 100 | 125 | 145 | 170 | 190 |
| | 6 | 65 | 0 | 0 | 20 | 40 | 60 | 85 | 105 | 130 | 150 |
| | 9 | 97 | | | 0 | 0 | 20 | 45 | 65 | 90 | 110 |
| | 12 | 130 | | | | | 0 | 5 | 25 | 50 | 70 |
| | 15 | 162 | | | | | | 0 | 0 | 10 | 30 |
| | 18 | 194 | | | | | | | | 0 | 0 |
| 2 | 3 | 32 | 35 | 55 | 80 | 100 | 120 | 145 | 165 | 190 | 210 |
| | 6 | 65 | 0 | 15 | 40 | 60 | 80 | 105 | 125 | 150 | 170 |
| | 9 | 97 | | 0 | 0 | 20 | 40 | 65 | 85 | 110 | 130 |
| | 12 | 130 | | | | 0 | 0 | 25 | 45 | 70 | 90 |
| | 15 | 162 | | | | | | 0 | 5 | 30 | 50 |
| | 18 | 194 | | | | | | | 0 | 0 | 10 |
| 1 | 3 | 32 | 55 | 75 | 100 | 120 | 140 | 165 | 185 | 210 | 230 |
| | 6 | 65 | 15 | 35 | 60 | 80 | 100 | 125 | 145 | 170 | 190 |
| | 9 | 97 | 0 | 0 | 20 | 40 | 60 | 85 | 105 | 130 | 150 |
| | 12 | 130 | | | 0 | 0 | 20 | 45 | 65 | 90 | 110 |
| | 15 | 162 | | | | | 0 | 5 | 25 | 50 | 70 |
| | 18 | 194 | | | | | | 0 | 0 | 10 | 30 |
| 21 | 227 | | | | | | | | 0 | 0 | |

Table 3. Estimated Apparent N Contributions from Legumes

| Legume Crop | Nitrogen Fertilizer Reduction (lb/acre) | |
|---|---|-------------|
| | Medium & Fine Textured Soils | Sandy Soils |
| Soybean | 45 | 45 |
| Alfalfa (70-100% stand, > 4 plants/ft 2) | 150 | 100 |
| Alfalfa (30-69% stand, 1.5-4 plants/ft 2) | 120 | 70 |
| Alfalfa (0-29% stand, < 1.5 plants/ft 2) | 90 | 40 |
| Sweet Clover and Red Clover | 80% of credit allowed for alfalfa | |

Table 4. Estimated N Contributions from Manures and Other Waste Materials for the First Crop After Application

| | Dry Materials | Liquid Materials |
|-------------------------------|---------------|----------------------------|
| | lb N/ton | lb N/1000 gal |
| Beef Feedlot Manure | 4-5 | Swine - Liquid Pit 10-15 |
| Dairy Manure | 3 | Swine - Lagoon 2-5 |
| Sheep Manure | 5 | Beef - Li Liquid Pit 10-12 |
| Poultry Manure | 12-17 | Beef - Lagoon 1-2 |
| Composted Beef Feedlot Manure | 10-14 | Dairy - Liquid Pit 7-8 |
| Sewage Sludge | 2-3 | Dairy - Lagoon 1-2 |
| Horse Manure | 3 | Cheese Whey 1-2 |

Waste material credits shown in Table 4 can vary considerably depending on how waste materials are handled and applied. For more credit, have a sample of the waste material analyzed.