Nitrogen Adjustments for Sugar Beets

Crop Choice: SMBSC Beets
Southern MN Beet Sugar Coop Crop Choice

A. Yield Goal is set and cannot be changed.
B. Suggested Guideline is set at University. Other guidelines are not available.

Total N fertilizer recommendations are based upon the depth of the soil sample, the soil test nitrate-N level, the previous crop credit and having a minimum 65 lb N/acre in the top 24 inches of soil profile.

Total N recommendation based upon soil sample depths:
- If 48" depth, then total N = 110 lb N/acre
- If 42" depth, then total N = 100 lb N/acre
- If 24" or 36" depth, then total N = 90 lb N/acre
Note: A minimum of 24" depth is required to get an N recommendation.

Previous crop credits based upon University guidelines
- If soybeans, edible beans, peas then the N credit = 40 lb N/acre
- If sweet corn, then the N credit = 20 lb N/acre
- If alfalfa, then the N credit = 50 lb N/acre

A minimum 65 lb N/acre in the 0-24" profile is necessary for early canopy development, regardless of high levels of deep nitrogen.

Crop Choice: Sugar beets 130/100
Calculating Available Deep Nitrogen for Sample Depths Greater than 24”:
If the sample depth is greater than 24", all the nitrogen in the 0-24" and 24-48" depth is subtracted from 130. If the sample depth is equal to 36", all the nitrogen in the 0-24" and 24-36" depth is subtracted from 115.

Example: 0-24" soil nitrate = 55 lb/a and 24-48" soil nitrate = 30 lb/a.
Suggested nitrogen application rate = 130 lb/ac - (55 lb/a + 30 lb/a) = 45 lb/a

Calculating Available Deep Nitrogen for Sample of 24” depth:
If the sample depth is 24", all the nitrogen in the 0-24" is subtracted from 100.

Example: 0-24" soil nitrate = 55 lb/a.
Suggested nitrogen application rate = 100 lb/ac - 55 lb/a = 45 lb/a