

AGRICULTURAL BEET

April 17th, 2020

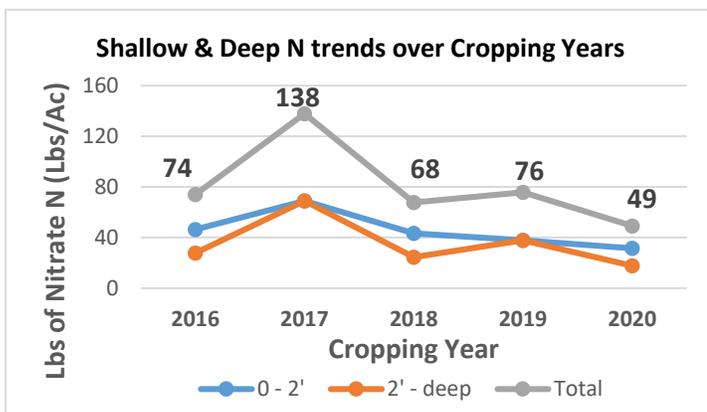
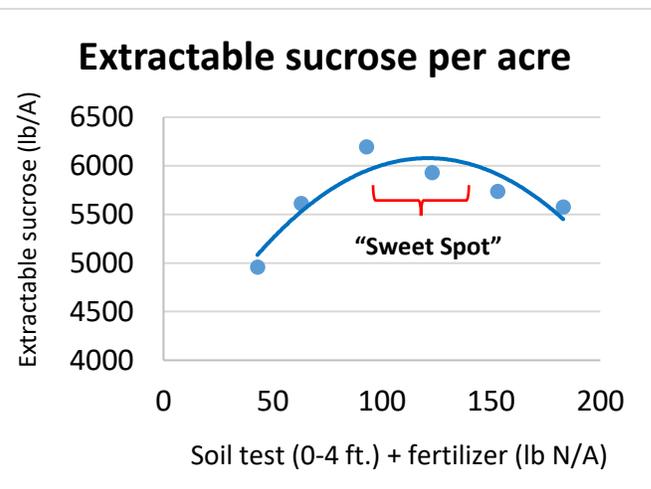
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Foresight is 2020

Recognition of SMBSC Soil Fertility Analysis Program Nitrate Trends to Manage the 2020 Crop.

A previous AgBeet offered explanation and support for “sweet spot” management of soil plus applied Nitrogen (N) for sugarbeet production. The sweet spot was described as a flexible N management range to account for intra and inter-field variation as well as an array of field and/or environment conditions.

The graph to the right represents 2019 data from a trial near Redwood Falls that provides a visualization of this management area. The Extractable Sucrose per Acre (ESA) response curve to applied plus soil test nitrogen levels strongly identifies a penalty that relates to both limited and excessive nitrogen levels. This implies that N management be cognizant of the downward slopes on either side of the sweet spot.



The only real way to maneuver effectively within the sweet spot is to account for the amount, and to fully comprehend the variability of, nitrate nitrogen throughout the soil profile prior to calculating a fertilizer N management plan.

The graph to the left provides shallow, deep, and total nitrate trends at SMBSC since 2016. The relatively wet seasons that we have experienced in recent years has resulted in downward trends to both shallow and deep N pools. As with most trends, careful observation and strategic planning can assist with proper management to assure maximum return.

Action Item: Data from the fall of 2019 SMBSC Soil Fertility Analysis Program indicates the potential for lower than normal soil test nitrate values going into 2020. Therefore, it is important that your operation acknowledge these reduced levels and make adjustments to assure that your N management in the top two feet and overall are appropriately aligned with where you wish to operate within the sweet spot. SMBSC has had a long standing Soil Fertility Analysis program in place to provide compensation for the analysis fee of properly taken soil samples and has also recently provided a \$2/Acre incentive for sampling. If you are interested in taking additional samples this spring or in the future to take advantage of these programs, contact your agriculturist.

Steve Roehl – Ag Strategy Manager