# Agricultural Beet

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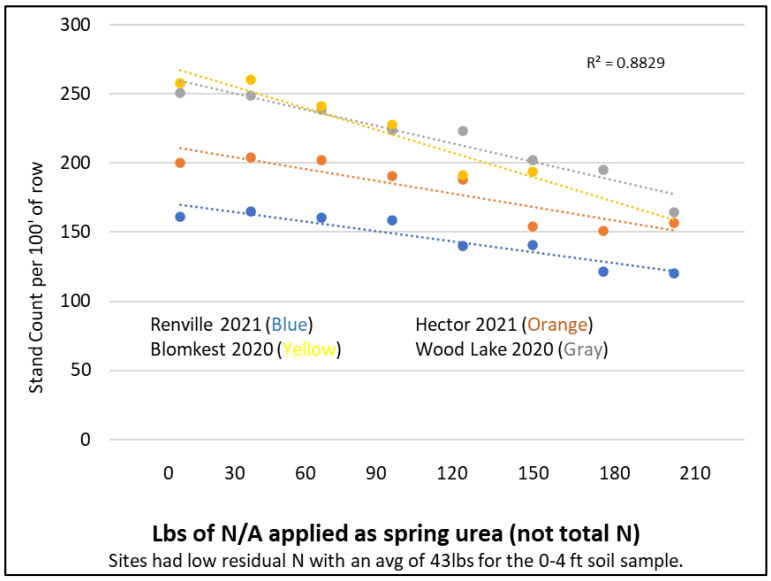
## Spring Practices to Improve Stand Establishment

**Spring Applied Fertilizers:** A reduction in sugar beet emergence can occur with the use of urea fertilizer in the spring. It has been observed in past years that stands are reduced at higher rates of spring urea (see graph below).



Sites had low residual N with an avg of 43lbs for the 0-4 ft soil sample.

When averaged across all four trials the emergence loss incurred over no urea applied is as follows:

| Lbs. of N/A | Stand Change |
|---|---|
| 30 | 1.1% |
| 60 | -2.8% |
| 90 | -7.2% |
| 120 | -14.0% |
| 150 | -20.0% |
| 180 | -23.8% |
| 210 | -27.2% |

As you can see even 90lbs of N/A applied as spring urea can start to cause emergence reduction. However, the severity likely depends on environmental conditions, such as the amount of rainfall shortly after planting. As you set your planting population this spring, consider your potential risks of stand loss.

Researchers from Lantic Inc. have also noted severe stand reduction on irrigated land when low amounts of water (< 0.6") were applied after planting with spring urea rates greater then 75lbs of N per acre. Applying greater amounts of water reduced the negative effects of urea on sugar beet safety.

**Spring Cover Crop:** Sugar beet stand loss can occur after emergence due to windy conditions. Planting a spring cover crop is a proven practice that can reduce stand loss by 12+ beets per 100' of row and return 189lbs ESA per acre based on 2016-2020 SMBSC APD data. If you are planning to plant a spring cover crop, be sure to not exceed 2 pints of ethofumesate as higher rates can negatively impact the cover crop establishment.

Sugar beets can compensate for low stand counts by the remaining beets growing larger. However, this can lead to additional problems that arise from inconsistent beet size: pinch wheel setting, defoliator setting, etc., that can lead to increased harvest losses. With the rising cost of fertilizer and the negative impact that excessive N can have on both the stand and quality of your sugar beet crop, 2023 is a great time to get a spring soil sample and only apply the nitrogen that the crop needs. SMBSC will pay 100% of the sample analysis fees for the required tests and directly compensate shareholders $2 per acre for the fields sampled, planted to sugar beets in 2023, and submitted through the SMBSC Soil Fertility Analysis Program. Contact your agriculturalist or soil sampler with any questions about the program.