American Crystal Sugar Company
AgNotes

November 11, 2019
Issue 609
Joe Hastings, Editor

www.crystalsugar.com

Managing Unharvested Beets

Because of unprecedented harvest difficulties due to wet conditions this year, many acres in fields were not able to be harvested. When sugarbeets are left unharvested potential management considerations should be taken for crop production on those fields in 2020.

General Considerations on Unharvested Acres

- Defoliate beets if ground can support the topper.
    - A flail shredder could be used if ground can't support a topper.
- Defoliating/shredding will accelerate the release of nitrogen for the subsequent crop.

Leaving sugarbeet roots intact in the ground provides the highest potential for root deterioration.

What we've experienced in the past with tillage:

- Tillage will lift the sugarbeet root out of the ground and deposit the root nearly entirely whole on the soil surface.
- Multiple tillage passes would be required to incorporate, increasing fuel and labor costs.
- The root not being surrounded by soil greatly increases the time to decay creating a dry carcass.
- Dried non-decaying sugarbeet root carcasses on the soil surface become a nuisance for the next crop in rotation.

Loose sugarbeet roots can float, in spring flooding situations they can travel onto neighboring fields causing issues for that crop or accumulate in ditches and plug drainage culverts.

- Make a map of unharvested areas for future reference.
- Unharvested areas may justify separate management practices in 2020.
- Careful spring tillage may be required to maximize stand establishment
- If seedbeds are poor consider increasing seeding rates by 10% to overcome stand establishment problems with small grains, corn or soybean.
- If planting row crops following unharvested beets, consider using GPS/RTK for planting between the existing sugarbeet rows, leaving the unharvested sugarbeet roots undisturbed.

Fertility Management on Unharvested Acres

Nitrogen

- Defoliation/Flail shredding of tops will accelerate release of nitrogen for subsequent crops.
- N in the sugarbeet tops will be available very early in the spring of 2020.
- Due to saturated soils, denitrification and leaching of available N has possibly occurred.
- The sugarbeet root material will tie up (immobilize) nitrogen making nitrogen fertility management challenging.
  - Fall soil testing will not give an accurate index of available nitrogen.
  - Spring soil testing would be a bit better than Fall.
  - Soil sample areas where beets were not harvested separately from the rest of the field in the fall of 2020, nutrient differences are likely to occur.
- An additional 30-50 lbs./acre of actual Nitrogen will be needed for all non-legume crops in 2020.
  - Each ton of roots with yellow tops will tie up about 5-6 lbs. per acre of soil nitrogen.
  - Each ton of roots with green tops will tie up about 2 lbs. per acre of nitrogen.
- Plant soybeans on unharvested sugarbeet acres to avoid N management concerns in 2020.
- Spring applied N for the 2020 crop on unharvested beet acres will be used more effectively than Fall applied N.
- Apply N fertilizer as close to planting as possible to reduce nitrogen immobilization as unharvested beets decompose.
- Banded N for row crops will be more effective than broadcast nitrogen.
- Side dress part of the nitrogen in 2020 after crop emergence to maximize N use efficiency for long season crops like corn.
- N management to achieve malting barley quality will be more challenging on areas of fields where beets were left.

For prompt answers to your questions and comments, call and leave a message and Tom Astrup or one of his staff will respond as soon as possible.

Shareholders: 1-800-633-8941

Potassium

- Leaving sugarbeet roots and tops shouldn't alter the content of available K in the soil.
- No additional K fertilizer should be required - follow normal soil test recommendations

Phosphorus and Sulfur

- P deficiency might occur on fields testing low or very low for P.
- Use past P soil test data on unharvested acres to fertilize for 2020.
- Consider applying additional P fertilizer for crops with high demand like soybeans.
- Banded applications of P in the spring will be most effective for 2020 crops.
- Starter P is recommended where practical to use it.
- Sulfur deficiency is not very likely but might occur early in the spring and disappear as crops root into subsoil sulfur supplies.

Diseases

- If unharvested areas had root disease present, these areas are likely to have increased inoculum levels in that part of the field for future sugarbeet crops.
- Plant small grains to reduce disease inoculum buildup on unharvested acres.
- If beets unharvested are from a field with an Aphanomyces history:
    - The next time beets are planted, plant a high tolerant Aphanomyces variety and use Tachigaren up to 45 grams.
- If beets unharvested are from a field with Rhizoctonia present:
    - Consider small grains for 2020 instead of beans, corn or potato that build up Rhizoctonia inoculum.
    - The next time beets are planted, plant a variety with high Rhizoctonia tolerance and use Azteroid fungicide in-furrow as well as a Post Quadris application.

Crops to Consider on Unharvested Acres

- Soybean – 1st choice
    - Soybeans are a legume and will use nitrogen available or make its own supply making them the best choice for Nitrogen management and lowering nitrogen input costs. Consider increasing plant populations by 10% if seedbeds are poor.
- Edible beans – 2nd choice
    - Edible beans are a legume and will use nitrogen available or make its own supply making them another good choice for Nitrogen management and lowering nitrogen input costs. Consider increasing plant populations by 10% if seedbeds are poor.
- Small grains – 3rd choice
    - Small grains will need an extra 30 - 40 lbs. of actual nitrogen added per acre to offset soil nitrogen tied up in soil by the extra sugarbeet organic matter.
- Corn – 4th choice
    - Corn following sugarbeets can experience "fallow syndrome" requiring higher amounts of Phosphorus starter fertilizer, 10 gal/a 10-34-0 is the high limit to be placed in-furrow. Corn will need an extra 30-50 lbs. of actual nitrogen. A population increase of 10% is recommended for poor seedbeds conditions.

CONTACT YOUR AGRICULTURIST

Contact your American Crystal Agriculturist for the most up-to-date information on issues affecting sugarbeet crops in your area.