SMBSC | Environmental Sustainability Fact Sheet

At Southern Minnesota Beet Sugar Cooperative, we recognize that not only does our success depend on sustainable environmental practices, but protecting and preserving the environment is the right thing to do.

From the soil our beets grow in, to the millions of gallons of water we manage and treat every day, we are continuously working to improve our activities in challenging and often changing conditions. Our work is focused on safeguarding natural resources, conserving energy and reducing our footprint.

From field to final product, we are committed to leading the way to a healthy and protected environment.

Protecting water

- The United States Environmental Protection Agency has recognized SMBSC's reduction of phosphorus by 2.5 times the required amounts.
- Surrounding our operations and beet fields, SMBSC has restored 33 acres of marginal cropland to wetlands, with another 40 acres to be restored in 2015.
- For over 15 years, SMBSC conducted research with the U of M to develop successful nitrogen management techniques designed to reduce fertilizer use.
- SMBSC has developed patent pending technology to create crop management zones that measure nutrients in the soil, which preserves current soil conditions to produce quality crops and reduces risk of excessive fertilization. With this information, growers are able to effectively implement the Plant Nutrition Institutes "4Rs" of fertilizer management: "Right Source, at the "Right Rate" in the "Right Place" at the "Right Time."
- Under the SMBSC Soil Testing Program, growers provide soil samples of the next year's sugar beet fields that SMBSC sends to a third-party for analysis. This provides important information about current fertility levels in the soil and allows our growers to make the best possible fertility management decisions.
- Construction of a new clean water pond and improvements to existing holding ponds are designed to increase capacity to effectively manage critical water resources that are awaiting treatment, or already treated and ready to be irrigated or discharged.
- Significant upgrades to SMBSC waster water treatment plant have allowed for increased capacity to handle larger volumes of water and provide greater security against elevated water levels in holding ponds, particularly when historically high amounts of precipitation occur.

Energy Efficiency

- Over the past 30 years, SMBSC has reduced its emissions by increasing its energy efficiency by 60%.
- One of SMBSC's most successful undertakings has been recycling steam produced by its boilers. This steam is captured and reused up to six (6) times in the processing of the sugar beet to sugar.
- Our strategic planning for beet pile site locations means that growers can driver fewer miles to unload harvested beets, reducing transport emissions and petroleum consumption.
- With onsite power generation, SMBSC is capable of increasing the efficiency of the energy required to generate electricity by being a combined heat and power facility.
- SMBSC produces biogas from waste products to supply fuel for heat generation.
- SMBSC is actively evaluating the use of solar, wind and biomass for sustainable energy generation.

Conserving Natural Resources

- SMBSC has been conducting research for several years to find ways to reuse soil washed off beets during processing that would otherwise be regarded as "waste" by environmental regulations. Finding alternative applications would allow this soil to be recycled and utilized as a valuable natural resource.
- SMBSC grows and irrigates hay fields with wastewater to grow animal feed. The hay acts as a natural filtration and treatment system for the wastewater.
- SMBSC reconstitutes calcium carbonate, a by-product of beet processing, by collecting and providing it to SMBSC beet growers and other agricultural producers. Farmers apply the by-product to their fields, which naturally improves soil quality with the many micronutrients found in this mineral.