



SmartNitrogen

Controlled Release Fertilizer

A *smarter* source of nitrogen.

A *smarter* way to grow.



Facts from the Field

APRIL 2007

Focus on Sugar Beets

Michigan sugar beet production value is estimated at \$150 million dollars. Beets are a critical agricultural crop well suited to Michigan climate and soil textures.

Nitrogen management is one of the most important nutrients in sugar beet production. Yield is reduced if nitrogen is in short supply while sugar content increases. Too much nitrogen decreases sugar content and purity. Nitrogen is the number one grower controllable factor in producing quality beets.



Goals in producing high quality beets include:

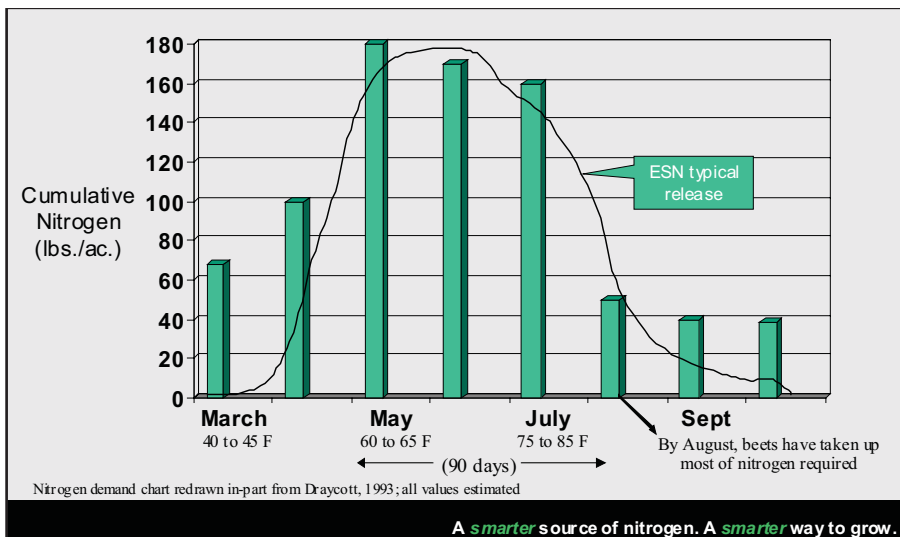
- Rapid early leaf growth,
- Attain full canopy by June 21; keep the canopy throughout the season,
- Nitrogen is depleted by early August and senescence begins.

ESN[®], a polymer coated urea, is the first controlled-release nitrogen product available for agricultural usage. ESN release is dependant upon soil temperature and moisture. It is designed to release approximately 80% of its nitrogen content between 60 and 90 days depending on temperature.

ESN release curve makes it a logical nitrogen management option in sugar beet production. Why?

Sugar beets can be planted at 35 to 45° F soil temperature. The goal is to get an early stand and promote early leaf growth, thus soluble nitrogen products are commonly used. A sidedress

Sugar Beet Nitrogen Demand



or foliar nitrogen application is also common, normally an early post at 2 to 4 leaves.

Soluble products are not persistent, hence the need for a sidedress, which has an economic cost. Plant growth and nutrient demand increases with rising soil temperature as does ESN release. As ESN is designed to release 80% or more of its nitrogen from 60 to 90 days, nitrogen availability is increasing as plant demand increases. ESN's controlled-release eliminates the need for a sidedress or foliar application, provides sustained nitrogen into late summer, without promoting late season leaf growth.

ESN Advantages:

- **Controlled-release nitrogen = sustained nitrogen supply**
- **Nitrogen supply is synchronized with plant demand**
- **Low risk of phytotoxicity and nitrogen loss**
- **Eliminates need for multiple applications = \$\$ saved**

**ESN...a logical option for Michigan sugar beets!
Contact your ESN dealer for more information.**

How can we help?

To make ESN a part of your spring nitrogen program, contact an authorized retailer or Agrium representative. For technical information, our agronomists can be reached during business hours.



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