

# Side Dress Nitrogen

2015

## Stewardship Team

Stewardship Team: Greg Richards, Curtis Funk,  
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# NITROGEN MANAGEMENT

- Current N recommendation
  - 4' sample rec= 130 lb. residual soil N + applied
  - 2' sample rec= 100 lb. residual soil N + applied
    - Minimum of 65 lb needed in top 2'

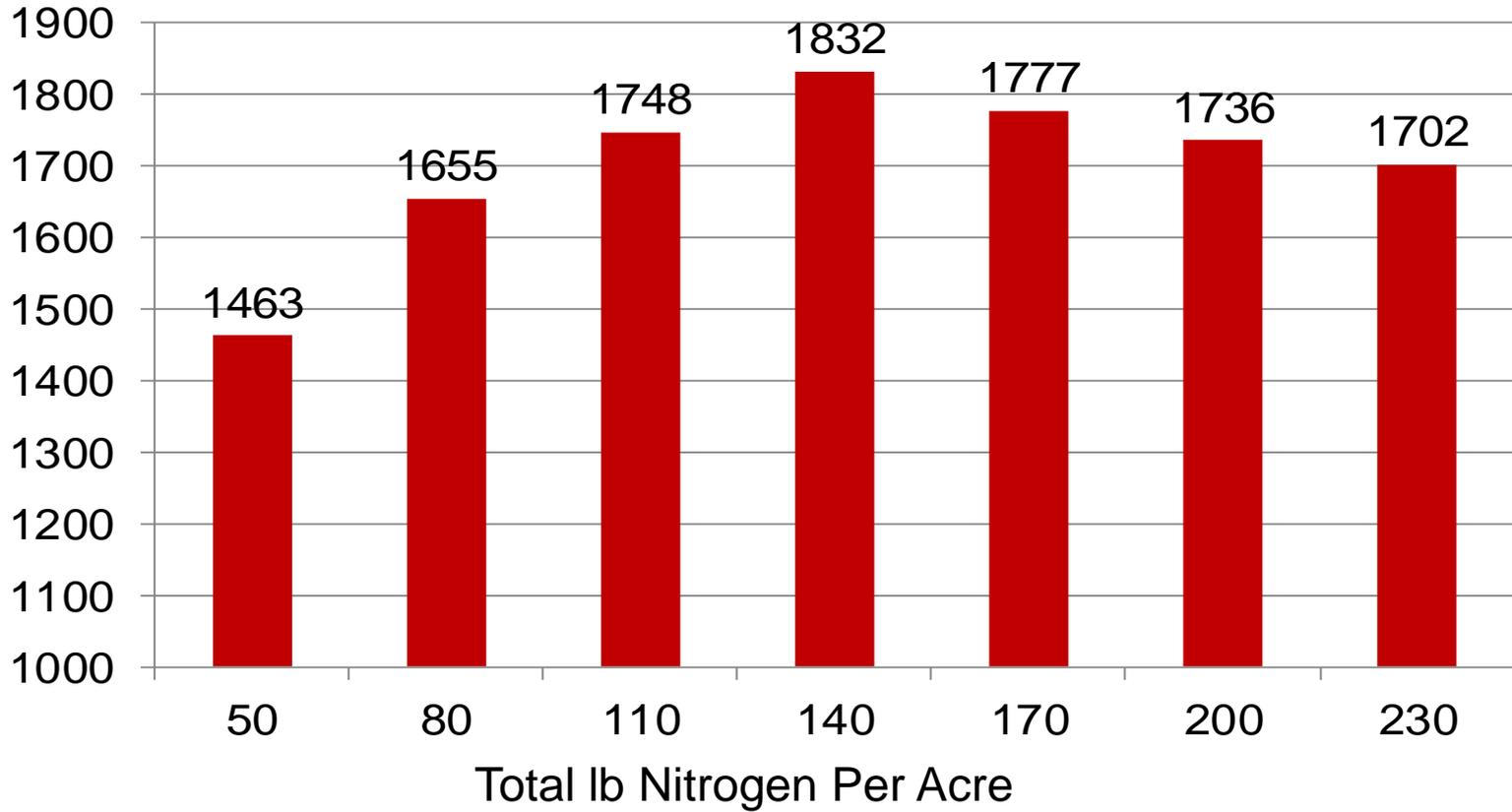
Is a 20 ton yield potential realistic anymore?

2012 season averaged 27.3 tons/Ac in RRV.

# Fall Applied Nitrogen

2011 University of Minnesota (Smith, Cymbaluk)

## Gross Revenue (\$/A)



# NITROGEN PRACTICES

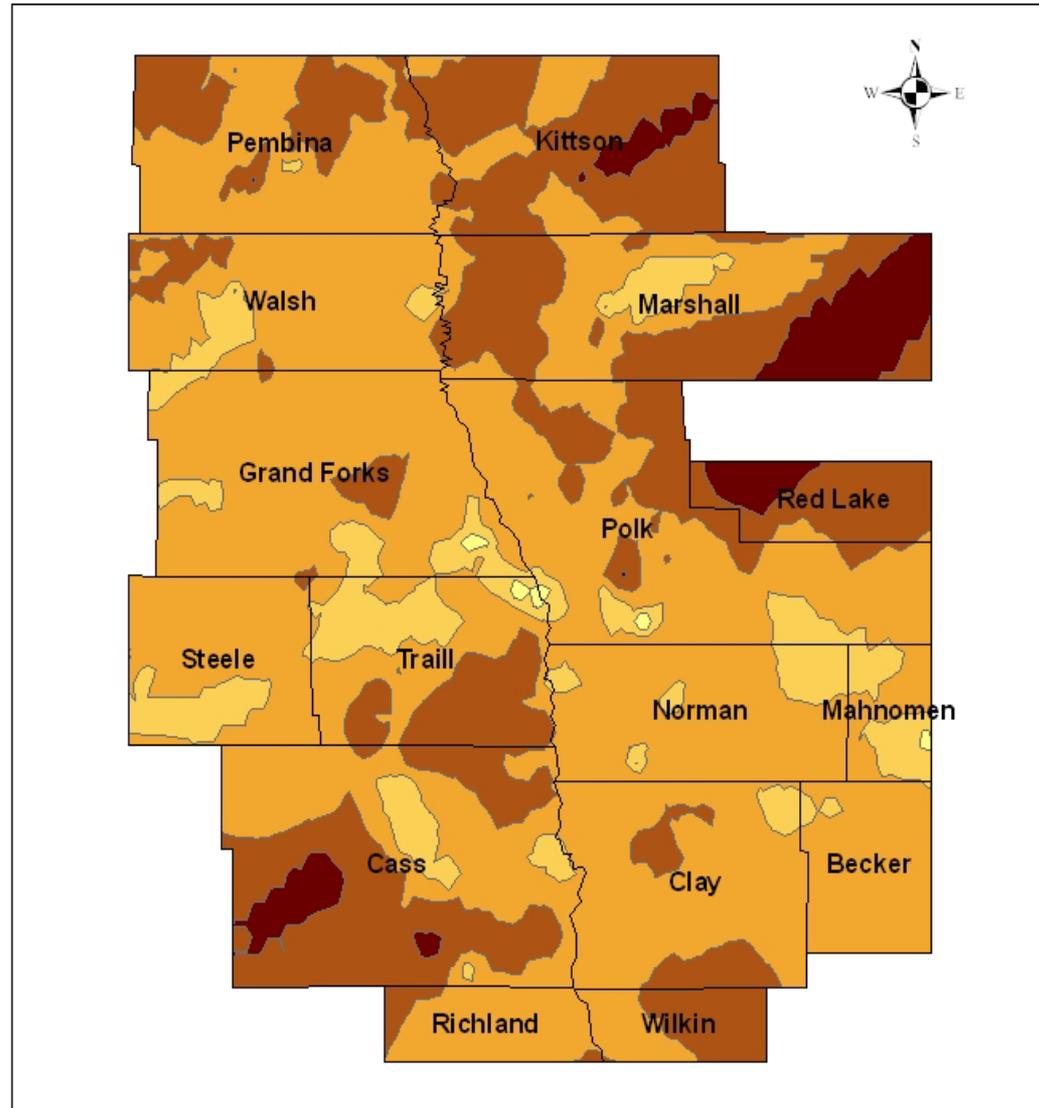
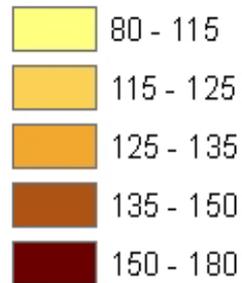
- Growers in some areas are increasing their Nitrogen Rates because of low yields.
- With VRT, zone sampling, areas of fields are receiving higher amounts of nitrogen. Up to 180lb N/Ac.

Inverse Distance Weighting Interpolation of Total Nitrogen Use in  
Sugar Beet Production in 2006 and 2007

University of  
Minnesota  
Dr. Albert Sims

**Legend**

**Total N (lbs. N/A)**



# Why Nitrogen Side Dressing?

- You maybe losing your nitrogen – losing \$
  - Volatization – nitrogen disappearing into the air
  - Leaching – nitrogen moving out of the root zone
  - Denitrification – nitrogen being tied up in OM
- Better Utilization of your Nitrogen
- Higher yield goals with new Varieties
- Zone management, improving yield potential

# Growers Considerations

- Past history - Your Sugar % and tonnage compared to the overall average with your district or area
- Long or short growing season
- Nitrogen loss
  - Standing water, wet saturated soil
  - Soil type
  - Fall or spring applied nitrogen
    - Soil temperature



“Any year with periods of saturated surface soils in the first 45 days after planting are subject to high levels of denitrification.”

Dr. Dave Franzen  
NDSU Extension Soil Specialist



# Nitrogen Side Dressing





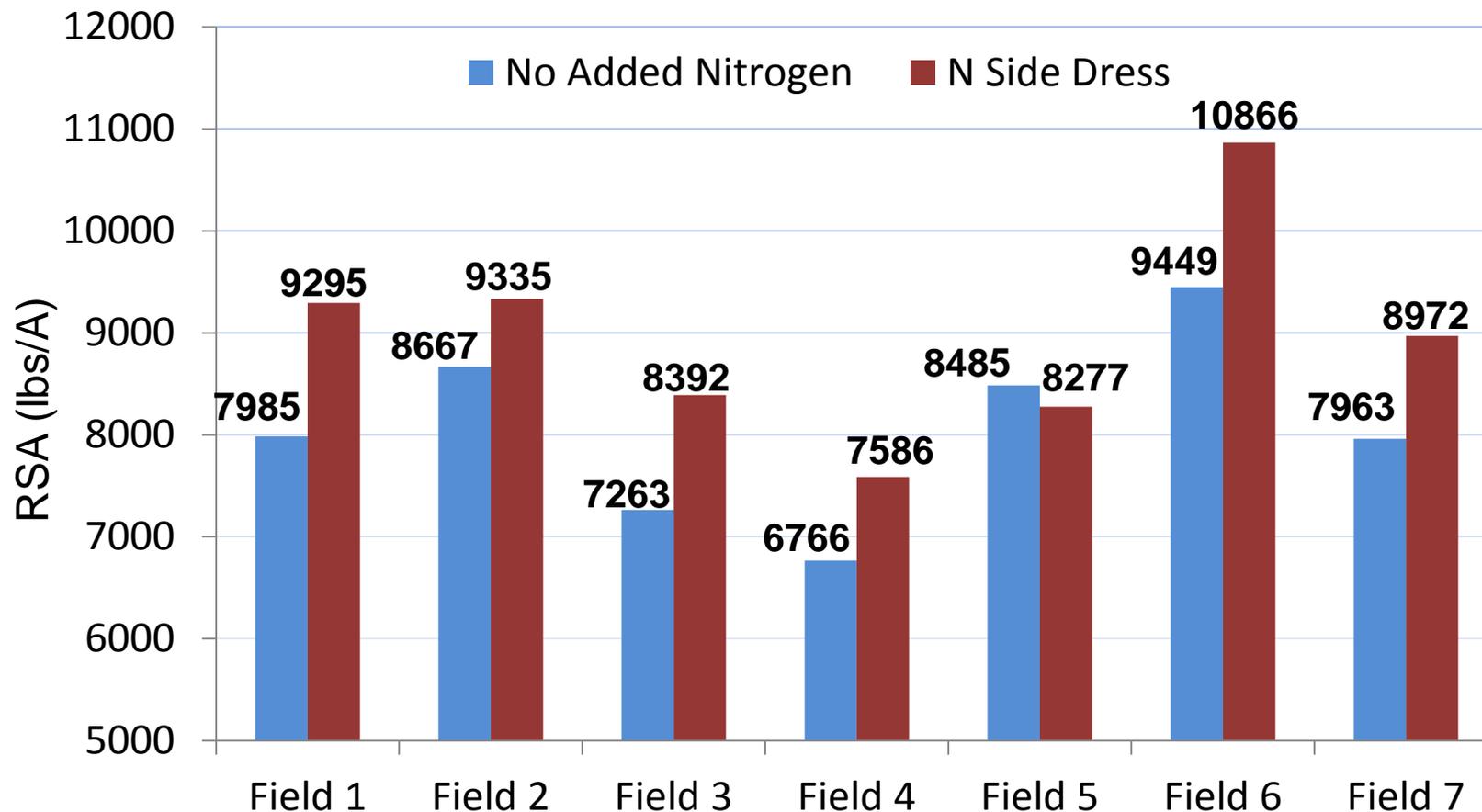
**Yetter**  
farm equipment  
YETTER MFG CO COLCHESTER, IL USA





# 2013 ACSC Stephen, MN

## Side Dress Nitrogen



# Use the ACSC Side Dress Nitrogen Calculator

- Helps determine amount of nitrogen needed
  - Starts with your desired amount of nitrogen
  - Takes Field conditions into consideration
    - Coarse, Medium or Fine soil texture
    - Wet or Dry
  - Takes Agronomic practices into consideration
    - Planting Date
    - Plant populations
    - Fall vs Spring fertilizer application

# Ask your Agriculturist

 <b>Nitrogen Sidedress Calculator</b> 	
Version 1.0.2	
N Goal - Total lbs/acre Desired * in lbs. Actual Nitrogen (Including Soil Test Residual N + Added Fertilizer N)	130
Soil Test Available Nitrogen * in lbs. Actual Nitrogen	25
Please Enter lbs/acre Nitrogen Applied * in lbs. Actual Nitrogen	105
Soil Texture	Fine
Date of Planting	April 1 - May 7
Nitrogen Application / When Applied	Fall
Field Condition / Fall	Wet
Field Condition / Spring Prior to Planting	Wet
Field Condition / After Planting	Average
Growth Stage * Do not count cotyledons	Greater Than 8 Leaf
Plant Population (After Emergence)	Greater Than 200
Recommended Sidedress Application Rate (lbs Actual N)	<b>75</b>

# Suggested Practices

- Fertilize in fall 80% of recommendation
  - Side Dress Nitrogen early spring
    - Long growing season side dress higher rate of Nitrogen
    - Short growing season side dress lower rate of Nitrogen
- Wet saturated areas of the field - side dress higher nitrogen rate
- Zones with higher yield potential - side dress higher rate of Nitrogen

# Suggested Practices cont.

- Side Dress N based on plant population
  - Higher plant populations need higher rate of nitrogen
- Don't Fall Fertilize fields with a coarse texture soil prone to flooding
- Soils wet in the fall use a Nitrification inhibitor
- Avoid pre-plant beets with side dress nitrogen
- Talk with your Agriculturist

# Your Questions