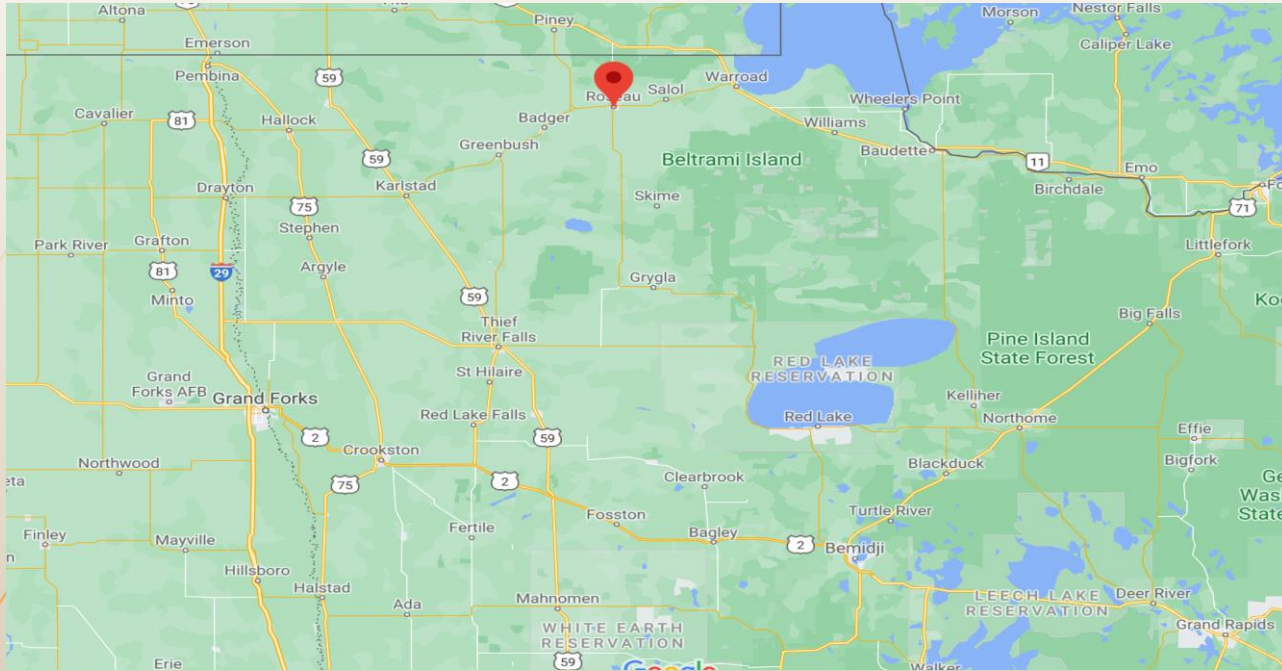


# Pushing Yields on Spring Wheat in Northern MN

By Tony Brateng





# South 89 Farms

- 1<sup>st</sup> Generation Farm
- 5,000 acres cropland
- Seed/Ag Retail Business
- Conventional Tillage
- 112 Frost Free Days



# Crops Grown

- Spring Wheat
- Soybeans (maturity 005-03)
- Canola
- Corn (70 - 83 Day)
- Kentucky Bluegrass Turf Seed
- Perennial Ryegrass Turf Seed



# Planting Preparation

- Crop Rotation
- Drainage
- Field work  
(Chisel plow, Vertical Tillage, etc.)
- Soil sampling/ Fertility needs
- Variety Selection  
(disease resistance, straw strength, yield, quality)
- Equipment service



# Planting

- ▶ Light tillage
- ▶ Plant early
- ▶ Certified Seed / Seed treatment
- ▶ Seed Depth
- ▶ Seeding Rate  
(1.4 -1.6 million seeds)
- ▶ Precision planting



# Crop Protection

- Weed Control
- Tissue sampling
- Streaming Fertilizer (5 leaf)
- Fungicide Herbicide timing
- Fungicide Flowering (head scab)



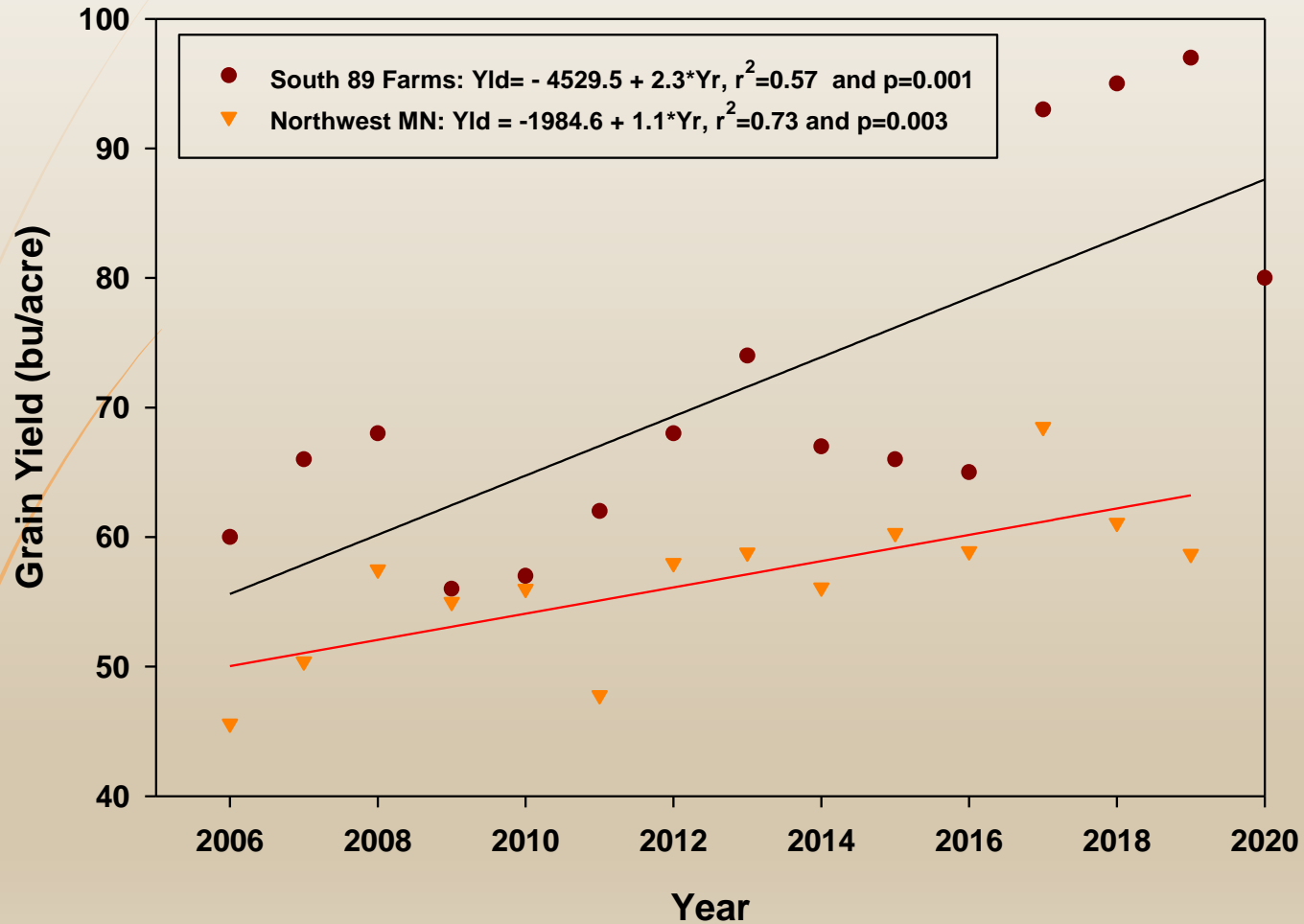




# Harvest

- Straight cutting or swathing
- On board protein analyzer
- Yield maps
- Residue management

# Wheat Yields 2006-2020



# So, what has changed....

- Crop Rotations (Canola, Soybeans)
- Varieties tolerance to scab and other diseases
- Intense breeding (Private and Public)
- Machinery (seeding equipment, precision ag, etc.)
- Split application of Nitrogen (Liquid 28% or Urea)
- Advances in fungicides (Prosaro, Caramba and MiravisAce)
- Application of fungicides (nozzle advancements)

# What's needed:

- ▶ Promote good crop rotation
- ▶ Learn to manage for yield and maintain quality (racehorse varieties)
- ▶ Testing varieties at the breeding level
  - ▶ Having a consistent scoring on disease resistance
- ▶ Testing fungicides
  - ▶ Application methods
  - ▶ Timings
- ▶ ROI – plot data

**Any Questions?**

