2012
SOUTHERN MINNESOTA
REGIONAL
RESEARCH & DEMONSTRATION
SUMMARY

The University of Minnesota Extension, University of Minnesota Southern Research and Outreach Center (Waseca), University of Minnesota Southwest Research and Outreach Center (Lamberton), Minnesota Soybean Research & Promotion Council, and University Center Rochester, as well as many local cooperators and agribusinesses, collaborated to conduct field trials throughout southern Minnesota.

The majority of these projects are funded through grant dollars, entry fees, and support from our cooperators.

The University of Minnesota is an equal opportunity educator and employer.
I want to thank our many partners in making this research report possible. University of Minnesota Extension and the research team including Faculty from Extension, the Southern Research and Outreach Center and the Campus, have worked to ensure these field research trials are directly applied and adapted to the local region and address the complex needs of Southern Minnesota production agriculture. The regional producers, industry sponsors and state and county partners who have provided land, financial contributions and expertise to make these research trials possible are very much appreciated.

Crop Management Tours, such as those conducted in Rochester and Waseca, provide hands-on events that bring meaning and an applied perspective to the crop trials. These tours give producers and industry professionals the opportunity to ask questions and have one-on-one time with University of Minnesota researchers and Extension Educators.

The many student interns involved in this important research are our workforce of the future! Their summer academic experience provides opportunities to accelerate their own professional careers and give them hands-on experiences working with Minnesota agriculture. We are actively promoting future projects and collaboration that will provide additional experiences with University of Minnesota Extension for students and future leaders of Minnesota.

Extension is committed to providing Minnesotans working in production agriculture with faster and more comprehensive access to the research and resources of the University through specialized educators at our Regional Offices.

This report is exemplary of the University’s commitment of providing timely and relevant research results. Again, congratulations to all partners involved!

Together, you and Extension continue to make a difference in Minnesota.

Respectfully,

Dr. LuAnn Hiniker
Campus Regional Director
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Check These Web Sites:
- http://www.extension.umn.edu
- http://appliedweeds.cfans.umn.edu
- http://sroc.cfans.umn.edu/index.html
- http://www.soybeans.umn.edu/home.htm
- http://www.extension.umn.edu/forages
- http://www.roch.edu

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Contact Fritz, Lisa, Ryan, or Mary Jane if interested in receiving the “Crops Connection” Newsletter sent via e-mail.
Rainfall totals are obtained from National Weather Service measurements at the Rochester International Airport.
A corn growing degree day (GDD) is an index used to express and track crop development through maturity. The index is calculated by subtracting a base temperature of 50°F from the average of the maximum and minimum temperatures for the day.

If the maximum temperature is greater than 86°F, then 86 is used in the equation. If the minimum temperature is less than 50°F, then 50 is used in the equation. These substitutions indicate that no appreciable growth takes place with temperatures greater than 86°F or lower than 50°F.

GDD = \((\text{Maximum temp} + \text{Minimum temp}) / 2\) - 50
# Extension and Research Team Members

## Extension Specialists
- **Lisa Behnken**: Extension Educator, Crops, Rochester
- **Fritz Breitenbach**: Extension Integrated Pest Management Specialist, Southeast
- **Brad Carlson**: Extension Educator, Crops, Mankato
- **Jeff Coulter**: Extension Agronomist, Crops, St. Paul
- **Jeff Gunsolus**: Extension Agronomist, Weed Scientist, St. Paul
- **Doug Holen**: Extension Educator, Crops, Fergus Falls
- **Dan Kaiser**: Extension Nutrient Management Specialist, St. Paul
- **Brad Kinkaider**: Extension Weed Management Scientist, St. Paul
- **John Lamb**: Extension Soil Scientist, St. Paul
- **Ian MacRae**: Research Entomologist, Crookston
- **Dean Malvick**: Research Plant Pathologist, St. Paul
- **Ryan Miller**: Extension Educator, Crops, Rochester
- **Seth Naeve**: Extension Agronomist, Soybean, St. Paul
- **Dave Nicolai**: Extension Educator, Crops, Farmington
- **Ken Ostlie**: Extension Entomologist, St. Paul
- **Craig Sheaffer**: Research Agronomist, St. Paul
- **Lizabeth Stahl**: Extension Educator, Crops, Worthington
- **Mary Jane Stearns**: Executive Office & Administrative Specialist, Rochester

## County Extension Educators
- **Jerry Tesmer**: Fillmore and Houston Counties
- **Jake Overgaard**: Winona County
- **Dan Martens**: Benton, Morrison and Stearns Counties
- **Mike Boersma**: Pipestone County

## SROC (Southern Research & Outreach Center – Waseca)
- **Paul Adams**: Senior Research Plot Technician
- **Matt Bickell**: Assistant Scientist, Agronomy
- **Senyu Chen**: Research Nematologist
- **Wayne Gottschalk**: Senior Research Plot Technician
- **Tom Hoverstad**: Scientist, Agronomy
- **Cathy Johnson**: Senior Lab Technician
- **Gregg Johnson**: Research Agronomist, Weed Management
- **Jeff Vetsch**: Assistant Scientist, Soils

## SWROC (Southwest Research & Outreach Center)
- **Jodie Getting**: Scientist, Agronomy
- **Bruce Potter**: Research Entomologist
- **Steve Quiring**: Scientist, Agronomy

## Agricultural Interns
- **Brent Breitenbach**: Ag Intern, Rochester
- **Caitlin Durow**: Ag Intern, Rochester
- **Bill Kuisele**: Operations Technician
- **Matt Mitchell**: Ag Intern, Rochester
- **Steve Reiter**: Ag Intern, Rochester
- **Amanda Welter**: Ag Intern, Rochester
- **Kevin Welter**: Ag Intern, Rochester

## Minnesota Crop Improvement Association
- **Roger Wippler**: Manager

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