SECTION F - FACTORY OPERATIONS

New Approach to Sugar Drying and Cooling .................................................................................. 687  
Hartmut Hafemann, Reinhold Hempelmann

Novel Design of a Continuous Centrifugal and Its Operational Benefits ........................................ 717
Irma Geyer, Hans J. Schmidt

Influence of Sugar End Syrup pH on Overall Color Rise in the Sugar End and Color of Molasses
Produced ........................................................................................................................................ 741
Christopher D. Rhoten

Cossette Quality and the Impact This Has on Factory Operations .................................................. 749
Galan M. Rogers

Biobased Products: Opportunities and Challenges in the Sugar Industry ....................................... 793
Arvind Chudasama

Pneumatic Conveying in Sugar Production ...................................................................................... 794
Jonathan Thorn

Influence of Thin Juice pH Management on Thick Juice Color in a Factory Utilizing Weak Cation
Thin Juice Softening ......................................................................................................................... 799
Christopher D. Rhoten

Process Solids Separation on Raw Juices ......................................................................................... 808
Blake Klinger
Results and Experiences with the New Putsch PKF NG
Chris L. Patullo .......................................................................................................................... 809

Utilization of Beet Sugar Factory Resources for Production of Algal Biodiesel
Vadim Kochergin, Mark Suhr, Christian Lohrey ........................................................................ 823

Design of Clarifiers with Turbulence Reduction Devices
Vadim Kochergin, Cy Gaudet ..................................................................................................... 824

Restoring the Operational Capacity of a Coupled-loop Molasses Desugarization Separator
David Groom, Heather Jarski, Terry McGillivray, Mike Goettel .................................................. 825

Solids Removal from the Flume Water System Phase V
Galan M. Rogers, Thomas T. Dolecheck, Karen M. Cummings .................................................. 833

Performance of Factory Anaerobic Contactors Operated with and Without Pre-acidification (PA) of Feed to the Contactors and Comparison to Bench PA Trials
Indrani S. Samarawewa, Terry McGillivray, Mike Goettel, Sheldon Seaborn, Dennis Burthwick .............................................................................................................................. 857

A Comparison of Anion Concentrations Across Carbonation at the Five Valley Factories of American Crystal Sugar Company
Heather R. Jarski, Terry D. McGillivray .......................................................................................... 871

Determination of Oleic Acid Based Saponin Removal by the Wastewater Treatment System at Southern Minnesota Beet Sugar Cooperative
Louis H. Knieper, Ron Kawlewski, Jeffrey L. Carlson ................................................................ 876

Strong and Flexible Thermal and Environmental Coupling Between Pulp Drying and Sugar Process
Olivier Vidal, Olivier Deur .............................................................................................................. 880

Initial Results and First Impressions with the Turbofilter
Marcelo Moreira De Silva, Eduardo Ieda .......................................................................................... 909

Steam Drying of Beet Pulp in Japan and Latest Development of the Technology
Kasper Gehl Larsen, Fumio Kituchi, Arne S. Jensen ..................................................................... 927

Clarification of High Strength Wastewater Using Dissolved Air Floatation Technology
Gary Cornelius, Glenn Augustine, Todd Maurice, Ron Kawlewski ................................................ 927

AGRICULTURAL PROCEEDINGS – POSTERS

SECTION A – AGRONOMY / POSTERS

Management of Unharvested Sugar Beet in Alberta
Bryan R. Avison, Peter J. Regitnig .................................................................................................. 947

Respiratory Losses in Sugar Beets As a Function of Storage Temperature, Field Nitrogen Application,
Sprouting Incidence and Handling Severity
Randolph Beaudry, Ron Gehl, James Stewart, Lee Hubbell ......................................................... 950

Four Years of Strip Tillage in a Wheat-Beet-Bean-Corn Rotation in ND and MN
Norman Cattanach, Laura Overstreet ............................................................................................ 951

Evaluate Nitrogen Rates, Application Timings and Application Methods for Sugarbeets in Michigan
Greg M. Clark, James F. Stewart, Lee A. Hubbell, Ralph Fogg, Brian Groulx ................................. 952

Managing Nitrogen Fertilizer for Maximum Returns of the Sugar Beet Crop, As Related to Soil Type
Greg A. Dean, David M. Elison ....................................................................................................... 957

Scalped Vs. Non-scalped Sugarbeets

Effect of Row Width and Population on Sugar Beet Yield and Quality
Brian J. Groulx, Lee A. Hubbell, James F. Stewart, Greg Clark ...................................................... 962

Effect of Manure Compost on Sugar Beet Yield and Quality
Gary W. Hergert, Rex A. Nielsen .................................................................................................. 967

Volunteer Glyphosate-resistant Soybean Management in Glyphosate-resistant Sugarbeet
Gary E. Powell, Christy L. Sprague .................................................................................................. 971

The Effect of Nitrogen and Time of Weed Removal on Sugarbeet Yield and Quality in Glyphosate-resistant Sugarbeet
Allicia J. Spangler, Christy L. Sprague, Darryl D. Warncke .......................................................... 972

Cover Crops and Reduced Tillage in Glyphosate-resistant Sugarbeet
Christy L. Sprague, Gary E. Powell, Erin C. Taylor ......................................................................... 973

Effects of Phosphorus Placement and Rate on Sugar beet Production
David D. Tarkalson, Dave L. Bjorneberg ....................................................................................... 974
Impact of Reduced Nitrogen Management in Sugar Beet Production on Silt Loam Soils in the Grande Ronde Valley of Eastern Oregon
Bill Wahlert, Greg Dean, David M. Elison

Influence of Different Brands of Glyphosate and Spray Adjuvants on Weed Control and Sugarbeet Performance
Robert G. Wilson, Gustavo M. Sbatella

SECTIONS B & E – PHYSIOLOGY, BIOTECHNOLOGY, GENETICS AND GERMLASM/POSTERS

Storage Comparison for Beets on and in a Storage Building Beet Pile
Murray S. Bullock, Duane Pearson, Dan Bjur

New Additions to the National Plant Germplasm System’s Beta Collection: Southern Morocco Expedition.
Barbara C. Hellier, Lee Panella, Yasmina El Bakloul, Naima Qariaou

Metabolic Changes Associated with Elevated Respiration Rate in Stored Sugarbeet Roots After Injury
Abbas M. Lafta, Karen Klotz Fugate

Sugar Beet Root Maggot (Tetanops Myopaeformis) Genes Modulated by Resistant and Susceptible Interactions with Beta Vulgaris
Haiyan Li, Santhilkumar Padmanaban, Ann C. Smigocki, Larry Campbell

Examining Salt Stress for Improvement of Seedling Vigor
Raymond S. Lindsey, J. Mitchell McGrath

SECTION C – ENTOMOLOGY AND PLANT PATHOLOGY / POSTERS

Determining Optimal Fungicide Timing for Rhizoctonia Root Rot of Sugar Beets in Nebraska Based on Soil Temperatures.
Robert M. Harveson, Kathleen A. Nielsen, C. Clay Carlson

Effect of Depth of Inoculum Placement on Development of Rhizoctonia Solani on Sugar Beet
Mohamed F. R. Khan, Somwattie P. Desouza, Jacob L. Wildman, Aaron L. Carlson

What is the Best Time to Control Rhizoctonia Root Rot of Sugar Beet?
Mohamed F. R. Khan, Somwattie P. Desouza, Jacob L. Wildman, Aaron L. Carlson

Field Strip Trial Evaluation of Seed Treatment Insecticides in the Red River Valley
Michael S. Mettger, Tim Kenyon, Neil Boedeker, Tom Hermann, Chris Motteberg, Lynn Dusek, Curtis Funk, Allan Catianach

Aerial Imaging to Assess Rhizoctonia Crown and Root Rot Severity in Sugar Beet Fields
Ian V. Macrae, Gregory J. Reynolds, Albert L. Sims, Carol E. Windels, Soizik Laguette

Remote Sensing for Assessing Rhizoctonia Crown and Root Rot Severity in Sugar Beet
Gregory J. Reynolds, Carol E. Windels, Ian V. Macrae, Soizik Laguette
Mating Type Idiomorphs Distribution and Their Correlation to Benzimidazole-resistance in Cercospora Betica from the Central High Plains Region, USA ................................. 1029
    James O. Obuya, Linda E. Hanson, Gary D. Franc

Fungicide Trials for the Control of Erysiphe Polygoni Causal Agent of Powdery Mildew on Sugar Beets in Idaho ................................................................. 1032
    Oliver T. Neher, Tamara Keeth

Integrated Pest Management Approaches for the Control of Erysiphe Polygoni, Causal Agent of Powdery Mildew on Sugar Beets in Idaho ................................ 1034
    Oliver T. Neher, Tamara Keeth

Neonicotinoid Seed Treatments and Foliar Sprays on Sugarbeet for Control of Severe Curly Top ................................................................. 1036
    Carl A. Strausbaugh, Imad A. Eujayl, Erik Wenninger

Environmental Conditions That Contribute to Development and Severity of Sugar Beet Fusarium Yellows Caused by Fusarium Oxysporum F. Sp. Betae: Temperature ........................................... 1038
    Kimberly M. Webb, Tammy Brenner

Effects of Herbicides and Sugarbeet Cultivars on Rhizoctonia Root and Crown Rot Development ................................................................. 1039
    Tsering Youdon, Gary D. Franc, Andrew R. Kniss, William L. Stump

FORUMS

FORUM – ENVIRONMENTAL - AIR QUALITY

Boiler Emissions Control Evaluation ............................................................................................................. 1042
    Dean Delorey

Sustainability Programs Applications to Sugar Beet Processing Facilities.................................................. 1070
    Dean Delorey

Green House Gases Emissions – The Dawn of Cap and Trade System...................................................... 1092
    Jelena Denin Djudjivic

US EPA Green House Gas Permitting Overview ....................................................................................... 1104
    Shawn Sullivan

EPA Regulations Impacting the Boiler House .............................................................................................. 1125
    Steven Smock

FORUM – BEET STORAGE

Use of Clamps and the Ropa Maus at Southern Minnesota Beet Sugar Cooperative ................................ 1145
    Todd Geselius

Innovative Alternatives to Traditional Piling of Sugarbeets ..................................................................... 1151
    Keith Kalso

FORUM – OFFICIAL VARIETY TRAIL PARAMETERS

Variety Approval Forum Michigan Sugar ...................................................................................................... 1195
    Jim Stewart

FORUM – RHIZOCTONIA

Rhizoctonia Forum ..................................................................................................................................... 1221
    Jim Stewart

R. solani AG 2-2 Intraspecific Groups (ISG) IV and IIB ............................................................................. 1252
    Carol E. Windels, Jason Brantner

FORUM – RHIZOCTONIA NURSERY TECH

Rhizoctonia Inoculation Techniques ........................................................................................................... 1272
    Jason Brantner, Carol Windels, Jeff Nielsen

Rhizoctonia Nursery .................................................................................................................................. 1297
    Lee Hubbell
FORUM – TILLAGE SYSTEMS

Tillage Systems Forum ................................................................. 1314
  John Smith

FORUM – WATER QUALITY

Sustainability Programs Applications to Sugar Beet Processing Facilities ........................................... 1070
  Dean C. Delorey

Whole Effluent Toxicity (WET) Testing and Evaluation .............................................................. 1325
  Louis Knieper

Groundwater Discharge Impacts ................................................................. 1343
  Steven Smock

Surface Water Discharge Limitations ............................................................... 1359
  Shawn Sullivan

Author Index