

POSTER SESSION

March 1 – March 4

Agronomy

- 1 **Effects of contrasting sugar beet rotations and residue management on soil organic carbon stocks.**
GRUNWALD, DENNIS*, PHILIPP GÖTZE and HEINZ-JOSEF KOCH, Institute of Sugar Beet Research, Holtenser Landstraße 77, 37079 Göttingen, Germany
- 2 **How does nitrogen fertilizer rate affect sugar beet quality and root yield in low, medium and high plant populations?**
ANDERSON, JAY F.* and PETER J. REGITNIG, Lantic Inc., 5405 – 64 Street, Taber, AB T1G 2C4
- 3 **Overlapping residuals for control of glyphosate-resistant waterhemp in sugarbeet.**
SPRAGUE, CHRISTY L., Michigan State University, 1066 Bogue Street, East Lansing, MI 48824
- 4 **Cereal rye suppresses glyphosate-resistant horseweed in sugarbeet.**
STILES II, BRIAN. Michigan State University, 7955 S Durand Rd Durand MI 48429
- 5 **Efficacy of Metamitron Applied PRE in the High Plains and Intermountain West Sugar Beet Production Region.**
LAWRENCE, NEVIN*¹, KNISS, ANDREW², FELIX, JOEL³ and ALDER, CLARKE ⁴, ¹University of Nebraska, ²University of Wyoming, ³Oregon State University, ⁴Amalgamated Sugar, ¹4502 Ave I, Scottsbluff, NE 69361, ²1000 E University Ave, Laramie, WY 82071, ³595 Onion Ave, Ontario, OR 97914, ⁴Nampa, ID 83687
- 6 **Experiences with sugarbeet tolerance to acifluorfen in Michigan.**
SPRAGUE, CHRISTY L., Michigan State University, 1066 Bogue Street, East Lansing, MI 48824
- 7 **KWS BEETROMETER® – Advancing Beet Quality Analysis.**
BERNHARDSONS, DUANE*¹, ELKE HILSCHER² and HEIKO NARTEN², ¹KWS Seeds LLC, ²KWS SAAT SE&Co. KG aA, ¹1500 S 40th St, Grand Forks ND 58201, ²Grimsehlstrabe 31, Einbeck Germany 37555

Physiology, Genetics and Plant Pests

- 8 **Gene Expression During Seed Germination Induced by Hydrogen Peroxide.**
CHU, CHENGGEN*, POORE, RACHAEL CLAIRE, BOLTON, MELVIN and FUGATE, KAREN, USDA-ARS, USDA-ARS, Sugarbeet and Potato Research Unit, Edward T. Schafer Agricultural Research Center, Fargo, ND 58102
- 9 **Development varieties with resistance to Alternaria spp.**
LENNEFORS, BRITT-LOUISE*¹ and DOUG RUPPAL², ¹MariboHilleshög Research AB, ²Hilleshog Seed LLC, ¹Säbyholmsvägen 24, 261 91 Landskrona, Sweden, ²1020 Sugar Mill Road, Longmont, CO 80 501
- 10 **UAV-based phenotyping of Fusarium tolerance.**
VANDRSTUKKEN, MAARTEN*¹, KRISTOF GOVAERTS¹, MATT COFFMAN², JUAN VEGAS¹ and ERIK DE BRUYNE¹, ¹SESVANDERHAVE, ²Magno, ¹Industriepark 15, BE- 3300 Tienen, ²5908 52ND AVE S, Fargo, ND 58104
- 11 **Further studies on Rhizoctonia resistance genes for improved screening of breeding lines.**

HOLMQUIST, LOUISE, Hilleshög Seed, Säbyholmsvägen 24, Landskrona, Sweden

- 12 **Breeding For Sugar Beet Root Maggot Resistance.**
MOE, PALOMA*¹, REKOSKE, MARGARET¹, MILLER, JAY¹, SCHUMANN, MARIO² and BATTACHARYYA, MADAN³, ¹KWS LLC, ²KWS SAAT AG, ³Iowa State University, ¹1325 Valley View Road, Shakopee, MN 55379, ²Grimsehlstrasse 31, 37555 Einbeck, Germany, ³G303 Agronomy 716 Farmhouse Ln, Ames, IA 5011-1051
- 13 **A breeding approach towards Root Knot Nematode resistant varieties – a perspective from SESVanderHave.**
OLIVIER, AMAND*¹, HENDRIKX DIRK, HANSE LEENDERT, JAN SELS and HENDRIK TSCHOEP, SESVANDERHAVE, Industriepark 15, BE- 3300 Tienen
- 14 **Early-Season Production and Dispersal of Cercospora beticola Spores in the Great Lakes Region of North America.**
BUBLITZ, DANIEL M.*¹, J. MITCH MCGRATH¹ and LINDA E. HANSON², ¹Michigan State University, ²USDA-ARS, ¹9923 Krueger Rd, Frankenmuth, MI 48734, ²612 Wilson Road, 37 Plant Biology, East Lansing, MI 48824
- 15 **Epidemiological studies of Cercospora leaf spot of sugar beet for improved management.**
HERNANDEZ, ALEXANDRA*¹, DANIEL BUBLITZ¹, CHRIS BLOOMINGDALE¹, NOAH ROSENZWEIG¹, LINDA E. HANSON² and JAIME F. WILLBUR¹, ¹Michigan State University, Department of Plant, Soil and Microbial Sciences, ²Michigan State University, Department of Plant, Soil and Microbial Sciences; United States Department of Agriculture – Agricultural Research Service, ¹612 Wilson Rd. Rm 35 East Lansing, MI 48824, ²612 Wilson Rd. Rm 37 East Lansing, MI 48824
- 16 **Identification of novel effector proteins in Cercospora beticola.**
HAMILTON, OLIVIA*¹, LORENA RANGEL² and MELVIN D. BOLTON², ¹North Dakota State University, ²USDA-ARS, ¹1340 Administration Ave, Fargo, ND, 58102, ²1616 Albrecht Blvd N., Fargo, ND, 58102
- 17 **A new portable qPCR technology to identify Cercospora beticola in asymptomatic leaves of sugar beet.**
NEUBAUER, JONATHAN*¹, MARK BLOOMQUIST² and MELVIN BOLTON¹, ¹United States Department of Agriculture, ²Southern Minnesota Beet Sugar Cooperative, ¹1616 Albrecht Blvd, Fargo, ND. 58102, ²83550 County Road 21, Renville, MN. 56284
- 18 **Investigations of Cercospora leaf spot Biology in Sugar Beet.**
KOCH, AMANDA R.* and W. L. STUMP, University of Wyoming, 1000 E University Ave, Department of Plant Sciences, Laramie, WY 82071
- 19 **Utilizing Foliar Boron for Managing Cercospora beticola.**
THOMAS, LACIE*, JAIME WILLBUR, DANIEL BUBLITZ, and KURT STEINKE. Michigan State University, 1066 Bogue Street, Plant and Soil Sciences Bldg., East Lansing, MI 48824.
- 20 **Responses of different fungicide-resistant Cercospora beticola populations to copper-based products.**
LIU, YANGXI*¹, AIMING, QI² and MOHAMED KHAN³, ¹North Dakota State University, ²University of Hertfordshire, ³North Dakota State University & University of Minnesota, ¹Fargo, ND 58108, ²Hatfield, AL10 9AB, U.K, ¹Fargo, ND 58108
- 21 **Michigan beet anthracnose not caused by Colletotrichum dematium.**
HANSON, LINDA E.*¹, JAN BYRNE², EMMA M. SCHLACHTER³ and JAIME F. WILLBUR³, ¹USDA-ARS, ²Michigan State University Plant and Pest Diagnostics, ³Michigan State University, ¹612 Wilson Road, 37 Plant Biology, East Lansing, MI 48824, ²578 Wilson Rd., Rm. 107, East Lansing, MI 48824, ³612 Wilson Road, 35 Plant Biology, East Lansing, MI 48824

- 22 **Histopathology of *Rhizoctonia solani* AG 2-2 infection of sugar beet.**
MINIER, DOUGLAS H.*¹ and LINDA E. HANSON², ¹Michigan State University, ²USDA-ARS, ¹1066 Bogue St. East Lansing, MI 48824, ¹1066 Bogue St. East Lansing, MI 48824
- 23 **Field testing for seedling response to *Rhizoctonia* damping-off.**
CORDER, HOLLY J.*¹, J. MITCHELL MCGRATH², THOMAS R. GOODWILL³ and LINDA E. HANSON³,
¹Michigan State University, ²Michigan State University, ³USDA, ¹3775 S. Reese Rd, Frankenmuth, MI 48734, ²612 Wilson Road, 37 Plant Biology, East Lansing, MI 48824, ²612 Wilson Road, 37 Plant Biology, East Lansing, MI 48824
- 24 **Azoxystrobin sensitivity of *Rhizoctonia solani* AG2-2 populations affecting Michigan sugar beet.**
WILLBUR, JAIME F.*¹, CHRIS BLOOMINGDALE, CAMERON PINCUMBE, CARLY N. HENDERSHOT, ALEXANDRA P. HERNANDEZ, EMMA SCHLACHTER, DOUGLAS H. MINIER and LINDA E. HANSON, Michigan State University, 612 Wilson Rd 35, East Lansing, MI 48824
- 25 **Rhizomania symptoms in strong *Rhizomania* tolerant varieties in southern Minnesota – Is there a R_z2 breaking virus strain emerging?**
GALEIN, YANN*¹, MAARTEN VANDERSTUKKEN¹, JAN SELS¹, MARK ANFINRUD² and OLIVIER AMAND¹, ¹SESVANDERHAVE, ²SESVANDERHAVE USA, ¹Industriepark 15, BE- 3300 Tienen, ²5908 52ND AVE S, Fargo, ND 58104
- 26 **Next Generation Sequencing Applied to Known and Emerging Soilborne Viruses of Sugar Beet.**
WEILAND, JOHN*, ALYSSA FLOBINUS, VANITHARANI RAMACHANDRAN and MELVIN D. BOLTON, USDA-Agricultural Research Service, 1616 Albrecht Blvd. N, Fargo, North Dakota 58102
- 27 **Characterization of pathogens and foliar disease interactions impacting sugar beet storage.**
HENDERSHOT, CARLY*¹, CHRIS BLOOMINGDALE¹, THOMAS GOODWILL², LINDA HANSON² and JAIME WILLBUR¹, ¹Michigan State University, Department of Plant, Soil and Microbial Sciences, ²USDA – ARS, Department of Plant, Soil and Microbial Sciences, ¹612 Wilson Rd. Rm 35 East Lansing, MI 48824, ²612 Wilson Rd. Rm 37 East Lansing, MI 48824
- 28 **Effect of *Cercospora* leaf spot on sugarbeet root storage properties.**
FUGATE, KAREN*¹, JOHN EIDE¹, PETER HAKK², ABBAS LAFTA², and MOHAMED KHAN², ¹USDA-ARS, ²North Dakota State University, ¹USDA, Agricultural Research Service, ETSARC, 1616 Albrecht Blvd. N., Fargo, ND 58102, ²Dept. of Plant Pathology, North Dakota State Univ., Fargo, ND 58108

Processing

- 29 **How improving crystallization process leads to fast Return On Investment: a little nod to Pareto's law.**
BOUCHÉ CATHERINE, ITECA SOCADEI, 445 Rue Denis Papin Europôle de l'Arbois 13100 Aix-en-Provence FRANCE

TUESDAY, MARCH 2
Section A - Agronomy

8:00 **General Session**

8:20 **Executive Vice President Address – Paul Pfenninger and Anna Murphy**

8:30 **Mechanical weed control in sugarbeet – european experiences and outlook.**
SCHLINKER, GERO, Betaseed GmbH, Friedrich-Ebert-Anlage 36, 60325 Frankfurt, Germany

8:50 **Evaluation of potential environmental and economic risks of mechanical weed control in sugar beet.**
FISHKIS, OLGA* and HEINZ-JOSEF KOCH, Institute of Sugar Beet Research, Holtenser Landstraße 77, 37079 Göttingen

9:10 **Break – Sponsored by Betaseed**



9:20 **Economic impacts of managing glyphosate resistant weeds in sugar beet.**
ADJESIWOR, ALBERT*¹, NEVIN LAWRENCE², PRASHANT JHA³, TODD GAINES⁴, ERIC WESTRA⁴ and ANDREW KNISS⁵, ¹University of Idaho, ²University of Nebraska–Lincoln, ³Iowa State University, ⁴Colorado State University, ⁵University of Wyoming, ¹Kimberly Research & Extension Center, 3806 N 3600 E, Kimberly, ID 83341, ² Panhandle Research and Extension Center, 4502 Ave I Scottsbluff, NE 69361, ³3212 Agronomy Hall, 716 Farm House Lane, Ames, IA 50011, ⁴300 W. Pitkin, Colorado State University, Fort Collins, CO 80523, ⁵Dept 3354, 1000 E. University Ave. Laramie, WY 82071

9:40 **Hooded sprayer for application of nonselective herbicides in sugarbeet.**
PETERS, THOMAS J.*¹, ALEXA L. LYSTAD¹ and DAVID C. METTLER², ¹North Dakota State University / University of Minnesota, ²Southern Minnesota Beet Sugar Cooperative, ¹Dept. 7670, PO Box 6050, Fargo, ND 58108-6050, ²83550 County Road 21, Renville, MN 56284

10:00 **Break – Sponsored by Mitsui Chemicals Agro**



MITSUI CHEMICALS AGRO

10:10 **Helping glufosinate work in the West.**
KNISS, ANDREW R., University of Wyoming, Plant Sciences, Dept. 3354, 1000 E. University Ave, Laramie, WY 82071

10:30 **Sugar Beet Lime Effects on High pH Soils and Crops in the Northwest U.S.**
TARKALSON, DAVID, USDA-ARS NWISRL, 3793 North 3600 East, Kimberly, ID 83341

10:50 **Break – Sponsored by Germains**



11:00 **Beet leafhopper populations and Beet curly top virus strains in southern Idaho.**
STRAUSBAUGH, CARL A.*¹ and ERIK J. WENNINGER², ¹USDA-ARS, ²University of Idaho, ¹USDA-ARS NWISRL, 3793 North 3600 East, Kimberly, ID 83341, ²Kimberly Res. & Ext. Center, 3806 North 3600 East, Kimberly, ID 83341

- 11:20 **Alternatives to chlorpyrifos for sugarbeet production in the Imperial Valley of California.**
KAFFKA, STEPHEN¹; MICHAEL RETHWISCH², AND BRYAN VAN DER MEY¹, ¹Department of Plant Sciences, Univ of California, Davis; ²UCCE Riverside County, One Shields Avenue, Davis, CA 95616
- 11:40 **A roadmap to durable BCTV resistance using long-read genome assembly of genetic stock KDH13.**
GALEWSKI, PAUL J* and EUJAYL, IMAD, USDA-ARS – Northwest Irrigation and Soils Research Laboratory

TUESDAY, MARCH 2
Section B –Physiology, Genetics and Plant Pests

8:00 **General Session**

8:20 **Executive Vice President Address – Paul Pfenninger and Anna Murphy**

8:30 **Evidence for the association of target-site resistance in cyp51 with reduced DMI sensitivity in European Cercospora beticola field isolates.**
MUELLENDER, MAXIMILIAN, Institute of Sugar Beet Research (IfZ), Holtenser Landstraße 77, 37079 Göttingen, Germany

8:50 **Digital technologies in growing sugar beets: the benefit of sensors and robots.**
MAHLEIN, ANNE-KATRIN, Inst. f. Zuckerrübenforschung, Holtenser Landstr. 77, 37075 Göttingen, Germany

9:10 **Break – Sponsored by ACH Seeds**



9:20 **Seed-borne Cercospora beticola can initiate disease in sugar beet.**
BOLTON, MELVIN*¹, REBECCA SPANNER¹, JONATHAN NEUBAUER¹, THIES M. HEICK², OLIVIA HAMILTON¹, VIVIANA RIVERA-VARAS³, RONNIE DE JONGE⁴, SARAH PETHYBRIDGE⁵, KIMBERLEY M. WEBB¹ and GARY A. SECOR³, ¹U.S. Dept. Agriculture, ²Aarhus University, ³North Dakota State University, ⁴Utrecht University, ⁵Cornell University, ¹Northern Crop Science Laboratory, 1616 Albrecht Blvd. N, Fargo, ND 58102-2765, ²Institute for Agroecology, Aarhus University, Slagelse, Denmark, ³Department of Plant Pathology, North Dakota State University, Fargo, ND, United States, ⁴Plant-Microbe Interactions, Department of Biology, Science4Life, Utrecht University, Utrecht, the Netherlands, ⁵Cornell AgriTech, Cornell University, Geneva, NY, United States

9:40 **Finding the perfect match: Triazole fungicide and tank-mix partner combinations for managing Cercospora leaf spot of sugarbeet.**
LIEN, AUSTIN* and ASHOK KUMAR CHANDA, Department of Plant Pathology, University of Minnesota, 495 Borlaug Hall 1991 Upper Buford Circle, St. Paul, MN 55108

10:00 **Break – Sponsored by Hilleshög Seed**



10:10 **Cercospora leaf spot management with varying levels of varietal disease tolerance.**
METTLER, DAVID* and MARK BLOOMQUIST, Southern Minnesota Beet Sugar Cooperative, 83550 County Road 21, Renville, MN 56284

10:30 **Under heavy rainfall conditions, fungicides do not provide season long control of *Cercospora beticola* on more susceptible sugar beet varieties.**

KHAN, MOHAMED*¹ and HAKK, PETER², ¹North Dakota State University & University of Minnesota, ²North Dakota State University, ¹Fargo, ND, 58105, ²Fargo, ND 58108

10:50 **Break – Sponsored by SES Vanderhave**



11:00 **Breeding for durable cercospora resistance embedded in a broader leaf disease package.**

ANFINRUD, MARK*¹, JAN SELS², JUAN VEGAS³ and HENDRIK TSCHOEP³, ¹SESVANDERHAVE USA, ²SESVANDERHAVE, ³SESVANDERHAVE, ¹5908 52ND AVE S, Fargo, ND 58104, ²Industriepark 15, BE- 3300 Tienen, ²Industriepark 15, BE- 3300 Tienen

11:20 **Molecular profiling of the sugar beet pathogen, *Fusarium secorum*.**

SHRESTHA, SUBIDHYA*¹, ROSHAN SHARMA POUDEL¹, RONNIE DE JONGE², KIMBERLY WEBB³ and MELVIN D. BOLTON⁴, ¹North Dakota state university, ²Utrecht University, ³USDA-ARS, Soil Management and Sugar Beet Research Unit, ⁴U.S. Dept. AgricUSDA-ARS, Northern Crop Science Laboratory, ¹Department of Plant Pathology, North Dakota State University, Walster Hall-306 Fargo, ND 58102, ²Utrecht, NL, ³Fort Collins, CO 80523, ⁴Fargo, ND 58102

TUESDAY, MARCH 2 **Section C - Processing**

8:00 **General Session**

8:20 **Executive Vice President Address – Paul Pfenninger and Anna Murphy**

8:30 **A field to factory comprehensive study of microbial flora of sugar beets and factory processing streams.**

BUSCHETTE, LYNN*¹, DAVID GROOM¹, JONATHAN NEUBAUER², REBECC SPANNER² and MELVIN BOLTON², ¹American Crystal Sugar, ²USDA-Agricultural Research Service, Northern Crop Science Laboratory, ¹1700 North 11th Street, Moorhead, MN 56560, ²1616 Albrecht Blvd. North, Fargo, ND 58102

8:50 **Evaluation of UV Disinfection for Sugar Beet Wastewater Applications.**

ANDY MCCABE*¹, TODD MAURICE², GARY CORNELIUS² and ALISON LING¹, ¹Barr Engineering, ²Southern Minnesota Beet Sugar Cooperative, ¹4300 MarketPointe Drive Suite 200, Minneapolis, MN 55435, ²83550 County Road 21. Renville, MN 56284

9:20 **Lime kilns on natural gas – theory and practical experience in the US with this highly efficient fuel.**

ARNDT, OLIVER*¹ and ², ¹Eberhardt Schwab GmbH, ², ¹Am Bauhof 17-21, 32657 Lemgo, Germany, ²

9:40 **Used of indirect heat exchange technology to cool the sugar in order to decrease the energy consumption and air treatment.**

REICHLING, Solex Thermal, 250,4720-106 AVE S.E; Calgary Alberta, Canada T2C 3G5

10:00 **Break – Sponsored by Hydrite**




10:10 **Simultaneous Sugar Cooling and Drying in a Retrofitted and Upgraded Granulator.**

BOLIVAR, FRANK, Sugar Technology International, 555 Republic Drive, Suite 115, Plano Texas, 75074, USA




WEDNESDAY, MARCH 3
Section A – Agronomy

- 8:00 **Announcements and Awards –**
Paul Pfenninger, President: Melvin Bolton, General Chairman: Mike Metzger
- 8:10 **Static Range Nitrogen Management in Northwest U.S. Sugarbeet Production.**
TARKALSON, DAVID*, BJORNEBERG, DAVID*, and OLSEN, DAVEY**, *USDA-ARS Kimberly Idaho,
**Amalgamated Sugar Company
- 8:30 **Manipulating sugarbeet plant population to compensate for high nitrogen fertility in southern Minnesota.**
GROEN, CODY, Southern Minnesota Beet Sugar Coop, Southern Minnesota Beet Sugar Coop
- 8:50 **Break – Sponsored by Syngenta** 
- 9:00 **At What Plant Stand is Replanting Needed?**
LAMB, JOHN*¹, RYAN KOWTA², ISRAEL SANTIAGO² and MARK BLOOMQUIST³, ¹University of Minnesota, ²Spreckels Sugar, ³Southern Minnesota Beet Sugar Cooperative, ¹2182 Woodbridge Way, Woodbury, MN 55125, ²Box 581 395 West Keystone Road Brawley, CA 92227, ³83550 County Road 21 Renville, MN 56284
- 9:20 **Dairy Manure and Fertilizer Effects on Microbial Activity of an Idaho Soil Growing Sugar Beet.**
TARKALSON, DAVID; DUNGAN, ROB; BJORNEBERG, DAVE; USDA-ARS, 3793 NORTH 3600 EAST Kimberly, ID 83341-5076
- 9:40 **Break – Sponsored by Hillesehg Seed** 
- 9:50 **Transcriptional changes during storage identify genes potentially involved in sucrose loss and carbohydrate impurity formation in postharvest sugarbeet roots.**
FUGATE, KAREN*¹, JOHN EIDE¹, ABBAS LAFTA², MOHAMED KHAN² and FERNANDO FINGER³, ¹USDA-ARS, ²North Dakota State University, ³Federal University of Vicosa, ¹USDA, Agricultural Research Service, ETSARC, 1616 Albrecht Blvd. N., Fargo, ND 58102, ²Dept. of Plant Pathology, North Dakota State Univ., Fargo, ND 58108, ³Dept. de Fitotecnia, Federal Univ. de Viçosa, 365712-000, Viçosa, MG, Brazil
- 10:10 **KWS BEETROMETER® in a Commercial Application.**
BERNHARDSONS, DUANE*¹, ELKE HILSCHER² and HEIKO NARTEN², ¹KWS Seeds LLC, ²KWS SAAT SE& co. KG aA, ¹1500 S 40TH ST, Grand Forks ND 58201, ²Grimsehlstrabe 31, Einbeck Germany 37555
- 10:30 **Break – Sponsored by Bayer** 
- 10:40 **Ag Forum - Growing sugar beet without seed treatments: lessons learnt from a European perspective**
Moderator: Mark Stevens, British Beet Research Organization

WEDNESDAY, MARCH 3
Section B –Physiology, Genetics and Plant Pests

- 8:00 **Announcements and Awards –**
Paul Pfenninger, President: Melvin Bolton, General Chairman: Mike Metzger
- 8:10 **Generation of targeted mutagenesis in sugar beet using geminiviral replicons for delivering CRISPR/Cas system**
EINI O¹, SCHUMANN N², NIESSEN M², VARRELMANN M¹ ¹Institut für Zuckerrübenforschung, Abteilung, Phytomedizin, Holtenser Landstr. 77, 37079 Göttingen, Germany, ²KWS SAAT SE & Co. KGaA, Grimsehlstr. 31, 37574 Einbeck, Germany
- 8:30 **CRISPR-based diagnostic method development for detecting viruses in Sugar beet.**
RAMACHANDRAN, VANITHARANI*, JOHN, WEILAND and MELVIN, BOLTON, Sugar beet and Potato Research Unit, 1616 Albrecht Blvd. N, Fargo, ND 58102
- 8:50 **Break – Sponsored by Betaseed** 
- 9:00 **Investigations on Rz1 resistance breaking populations of Beet necrotic yellow vein virus.**
LIEBE, SEBASTIAN, Institute of Sugar Beet Research (IfZ), Holtenser Landstraße 77, 37079 Göttingen, Germany
- 9:20 **Development of U.S. BNYVV infectious clones to study Rz1 and Rz2 resistance breaking.**
FLOBINUS, ALYSSA*¹, JOHN J. WEILAND² and MELVIN D. BOLTON², ¹North Dakota State University, ²USDA-ARS, ¹1402 Albrecht Blvd N, Dept of plant pathology, walster hall, Fargo ND 58105-5713, ²1307 18th St. N, Fargo, ND 58102-2765
- 9:40 **Break – Sponsored by Hilleshög Seed** 
- 9:50 **Development of molecular genomic resources for Polymyxa betae.**
MARTIN, FRANK*, VIVIANA CAMELO-GARCIA and WILLIAM M. WINTERMANTEL, USDA-ARS, 1636 East Alisal St., Salinas, CA 93905
- 10:10 **Methods to reduce Cercospora beticola inoculum in field.**
BLOOMQUIST, MARK*, DAVID METTLER and CODY GROEN, Southern Minnesota Beet Sugar Cooperative, 83550 County Road 21, Renville, MN 56284
- 10:30 **Break – Sponsored by Seedex** 
- 10:40 **Ag Forum - Growing sugar beet without seed treatments: lessons learnt from a European perspective**
Moderator: Mark Stevens, British Beet Research Organization

WEDNESDAY, MARCH 3
Section C - Processing

- 8:00 **Announcements and Awards –**
Paul Pfenninger, President Melvin Bolton, General Chairman Mike Metzger
- 8:10 **Utilization of Near Infrared Spectroscopy (NIRS), in the Rusagro-Chernyansky Molasses Desugarization Plant, for Continuous Process Monitoring and Control.**
WAMBOLT, CAROL L.*, LARSON H. CALDWELL and KYLE LOMBARDO, Amalgamated Research, LLC., 2531 Orchard Drive East, Twin Falls, ID 83301
- 8:30 **Molasses filtration with automatic discharge of dry solids.**
SCHÖPF STEFAN, Lenzing AG, Werkstrasse 2, 4860 Lenzing Austria
- 8:50 **Break – Sponsored by KWS Seed** 
- 9:00 **Fluorescence Investigation of Sugar Beet Processing Liquids.**
PETTYGROVE, MEGAN* and HENDERSON, WILLIAM, ChemTreat, 10041 Lickinghole Road, Ashland, VA 23005
- 9:20 **Automated Factory Exception Reporting Using Sugars™ 4.1 Mass and Energy Balance Software.**
KAHRE, SCOTT M., Sugars International LLC, 305 Inverness Way South Unit 204, Englewood, CO 80112.
- 9:40 **Break – Sponsored by Hydrite** 
- 9:50 **Red beet fiber composition comparison to sugar beet fiber.**
HOTCHKISS, ARLAND*¹, HOA CHAU¹, SENGHANE DIENG², STEFANIE SIMON¹ and JULIE HIRSCH²,
¹USDA, ²Ingredion Inc., ¹600 E. Mermaid Lane, Wyndmoor, PA 19038 USA, ²10 Finderne Avenue, Bridgewater, NJ, 08807 USA
- 10:10 **The Development of the Putsch Segment Filter – Bob Howe**
- 10:30 **Break – Sponsored by SES Vanderhave** 
- 10:40 **Forum – Controlling the Microbial Loading to Diffusers**
Moderator: David Groom – American Crystal Sugar Co.

THURSDAY, MARCH 4

Section A - Agronomy

8:00 **Announcements – Anna Murphy**

8:10 **A trait stacking breeding approach for increased stability in variety performance – an Idaho case study.**
SELS, JAN*¹, OLIVIER, AMAND¹, MAARTEN VANDERSTUKKEN¹, IBRAHEEM ADETUNJI¹, GLENDA WILLEMS¹, DAN BJUR², MARK ANFINRUD² and HENDRIK TSCHOEP¹, ¹SESVANDERHAVE, ²SESVANDERHAVE USA, ¹Industriepark 15, BE- 3300 Tienen, ²5908 52ND AVE S, Fargo, ND 58104

8:30 **Technology advances in sugar beet phenotyping and selection using new image processing methods.**
EKBLAD, TOBIAS, Hilleshög Seed, Säbyholmsvägen 24, Landskrona, Sweden

8:50 **Break – Sponsored by ACH Seeds**



9:00 **Breeding of sustainable Cercospora resistant varieties for the US market.**

HERRSTRÖM, JOAKIM*¹, PER SNELL¹, TYLER RING² and BRITT-LOUISE LENNEFORS¹,
¹MariboHilleshög Research AB, ²Hilleshog Seed LLC, ¹Säbyholmsvägen 24, 261 91 Landskrona, Sweden, ²1020 Sugar Mill Road, Longmont, CO 80 501

9:20 **Accelerating sugar beet germplasm development using genomics-informed breeding strategies.**
DORN, KEVIN*¹, NICK METZ¹, ANN FENWICK¹, AMY NIELSON¹ and BRADLEY SOWDER ², ¹USDA-ARS, ², ¹Crops Research Lab, 1701 Centre Ave, Fort Collins, CO 80526, ¹Crops Research Lab, 1701 Centre Ave, Fort Collins, CO 80526

9:40 **Break – Sponsored by Hilleshög Seed**



9:50 **Growing and feeding sugarbeets to dairy cows in the San Joaquin Valley of California.**

KAFFKA, STEPHEN¹, PETER ROBINSON², NICK CLARK³, AND GENE AKSLAND⁴, Depar. of Plant Sciences, UC Davis; Department of Animal Sciences, UC Davis; ³UCCE-Tulare County, and ⁴Agronomic Services, Visalia, California, Davis, California, 95616

10:10 **Update from the Hill – Scott Herndon, Vice President and General Counsel of ASGA**

10:20 **Closing remarks – Paul Pfenninger, Executive Vice President - ASSBT**

THURSDAY, MARCH 4

Section B –Physiology, Genetics and Plant Pests

8:00 **Announcements – Anna Murphy**

8:10 **Novel breeding tools and effective management of Aphanomyces cochlioides in sugar beet.**
ROSSI, VALENTINA*¹, LOUISE HOLMQUIST¹, ERIK ALEXANDERSSON² and LAURA GRENVILLE-BRIGGS², ¹Hilleshög Seed, ²Swedish University of Agricultural Sciences, ¹Säbyholmsvägen 24, Landskrona, Sweden, ²Box 102, Alnarp, Sweden

8:30 **DNA-based detection of *Aphanomyces cochlioides* infested soil and plant samples.**
BOTKIN, JACOB*¹, ASHOK CHANDA¹, FRANK MARTIN² and CORY HIRSCH¹, ¹University of Minnesota, CFANS, Dept. of Plant Pathology, 1991 Upper Buford Circle 495 Borlaug Hall St. Paul, MN 55108 ²USDA-ARS, 1636 East Alisal St Salinas, CA 93905

8:50 **Break – Sponsored by ACH Seeds**



9:00 **The effect of temperature, moisture and fungicide resistance on germination of *Cercospora beticola* conidia.**
RIVERA-VARAS, VIVIANA*¹ and GARY SECOR², ¹North Dakota State University, ²North Dakota State University, ¹Dept 7660 Box 6050, Fargo, ND 58108, ¹Dept 7660 Box 6050, Fargo, ND 58108

9:20 **Proliferation success of *Cercospora beticola* on sugar beet is associated with an early penetration and nutrient acquisition.**
BHUIYAN, M. Z. RAHMAN*¹, SHYAM SOLANKE², GAZALA AMEEN², ROBERT S. BRUEGGEMAN², PAWEL BOROWICZ¹ and MOHAMED F. R. KHAN³, ¹North Dakota State University, ²Washington State University, ³North Dakota State University & University of Minnesota, ¹Fargo, ND 58108, ²Pullman, WA 99163, ¹Fargo, ND 58108

9:40 **Break – Sponsored by Maribo**



9:50 **The effect of cercosporin production by *Cercospora beticola* on bacterial diversity in the sugar beet phyllosphere.**
RANGEL, LORENA I.*¹, OLIVIA HAMILTON², J.J. SANCHEZ GIL³, RONNIE DE JONGE ³ and MELVIN D. BOLTON ¹, ¹USDA ARS, ²NDSU, ³Utrecht University, ¹Northern Crop Science Laboratory, U.S. Dept. Agriculture, Fargo, North Dakota, USA, ²Department of Plant Pathology, North Dakota State University, Fargo, North Dakota, USA, ³Department of Plant-Microbe Interactions, Utrecht University, Utrecht, The Netherlands

10:10 **Update from the Hill – Scott Herndon, Vice President and General Counsel of ASGA**

10:20 **Closing remarks – Paul Pfenninger, Executive Vice President - ASSBT**

THURSDAY, MARCH 4

Section C - Processing

8:00 **Announcements – Anna Murphy**

8:10 **Forum – *Processing and Maintenance – Interactions and Dependencies***
Moderator: Bill Gough, Director of MIBST Beet End and Sugar End Processing Schools

10:10 **Update from the Hill – Scott Herndon, Vice President and General Counsel of ASGA**

10:20 **Closing remarks – Paul Pfenninger, Executive Vice President - ASSBT**