INTERNATIONAL INSTITUTE OF SUGAR BEET RESEARCH

76TH IIRB CONGRESS, 5-7 JUNE 2018
POSTER PROGRAMME

1 Agronomy

Management

1.1	Duval R., F. Courtaux, P. Amette	Cover crops species and varieties in field characterisation, for accurate sugar beet grower's advice
1.2	Richards J., S. Mooney, M. Stevens, D. Sparkes	Cover crops – useful for improving soil structure prior to sugar beet?
1.3	Stevens W.B., J.D. Jabro, A. Kalil, W.M. Iversen, B.L. Allen, U.M. Sainju	Performance of direct-seeded sugar beet in two crop rotations
1.4	Malmilehto S.	Effect of fleece cover to sugar beet yield and quality
1.5	Muurinen S., S. Malmilehto, M. Turakainen	Lighting up the sugar beet
1.6	Comar A., F. Maupas, F. Aubertin, K. Velumani, J. Beauvois, J. Labrosse, N. Henry, F. Baret	Wireless connected sensor for improving sugarbeet crop management, yield prediction and disease assement
1.7	Crécy H.	Inter row spacing and sugar beet population
1.8	Seebode S., M. Molthan, K. Schnepel, A. Krieg	Effects of optimized plant distribution on yield, quality and storability of sugar beets
1.9	Townsend T., D. Sparkes, S. Bowen, N. Crout	Data and model analytics to support customised crop management advice
1.10	Duval R., C. Toqué, F. Flenet, A.L. De Cordoue, S. Cadoux, A. Tailleur	Syppre project: design cropping systems to meet agricultural challenges by 2025
1.11	Gouwie C.	20 years of French sugar beet technical management evolution
1.12	Kaffka S., R. Tharp	Yield progress and resource use in sugar beet production in the Imperial Valley of California

Water use efficiency and irrigation

1.13	Barratt G., M. Stevens, E. Murchie, D. Sparkes	Understanding sugar beet water use efficiency (WUE)
1.14	Tarkalson D.D., B.A. King, D.L. Bjorneberg	Effects of deficit irrigation on sugarbeet soil water extraction
1.15	Kaffka S., K. Bali, O. Bachie	Comparison of surface irrigation with subsurface drip irrigation in the Imperial Valley of California for root yield and quality, water use and susceptibility to late-season root rots

Nutrition

1.16	Eigner H., C. Kreitzer	Cation Exchange Capacity – a necessary tool in sugar beet nutrition?
1.17	Duval R. et al.	Mineral nitrogen fertilisation: can application modality improve fertiliser's efficiency?
1.18	Curcic Z., M. Ciric, N. Nagl, K. Taski-Ajdukovic	Effect of nitrogen fertilizer application on sugar beet seed yield and quality
1.19	Tarkalson D.D., D.L. Bjorneberg, G. Dean	Improving sugar beet nitrogen recommendations in the Western United States
1.20	Bernadon-Méry A.	MULTISUC activates plant nutrition metabolism to improve sugar beet yield
1.21	Muurinen S.	Survey of nutrient status of sugar beet in Finland
1.22	Malmilehto S., M. Turakainen, S. Muurinen	Biochar addition to sugar beet soils
1.23	Muurinen S., S. Malmilehto	Applying starter phosphorous in Finland, how EU regulations have changed the way of using phosphorous in Finland
1.24	Horn D.	Effect of biogas fermentation residues and management of precrop on wheat and EUF extractable N and further nutrients in soil
1.25	Bresolin A., G. Campagna, M. Cenacchi	Use of probes to monitor the water and nutritional status of sugar beet
1.26	Campagna G., L. Marcheselli, D. Rosini	Improving technical assistance through drone and satellite surveys
1.27	Olsson Å.	Long term changes in soil-pH after liming with factory lime and lime stone meal
1.28	Malmilehto S.	Effect of lime with different doses, tillage systems and varieties
1.29	Malmilehto S.	Different tillage systems effects on sugar beet farming

Tillage

1.30	Przybył J., N. Mioduszewska, I. Kowalik	Sugar beets grown in the one and two-step strip-tillage system at different soil cultivation depths
1.31	Stevens W.B., J.D. Jabro, W.M. Iversen, B.L. Allen, U.M. Sainju	Strip-till sugar beet yield affected by rotation diversity and cereal crop residue management
1.32	Tarkalson D.D., W.B Stevens, D.L. Bjorneberg	Comparison of strip tillage and conventional tillage on yield and quality in U.S. Sugarbeet production

Harvest, storage, and beet quality

1.33	Van Honacker A.C.	Connected devices in sugar beet production
1.34	Aghaei M., M. Honarvar, M. Mizani, M. Bazrafshan	Assessment of mechanical properties of two sugar beet (*Beta vulgaris* L.) varieties during harvest and long-term storage in Fars zone Iran
1.35	Ekelöf J., J. Skyggeson	Interaction of surface moisture and frost on the storability of sugar beets
1.36	Potyondi L., J. Kimmel, F. Csima	Experiments for storage of sugar beet by covering the clamp
1.37	Schnepel K., W. Beyer, A. Loock	Selection of sugar beet varieties with good storability at KWS
1.38	Roger J.M., A. Despouy, J. Pruvost, J.L. Striebig	Assessing polarimetric sugar content by Near Infra-red Spectrometry
1.39	Mioduszewska N., J. Przybył, J. Dach, K. Pilarski	Analysis of methane efficiency of sugar beets used as co-substrate in biogas production
1.40	Tordeur A.	A connected beet, a tool to limit storage losses
1.41	Hoffmann C., M. Leijdekkers, J. Ekelöf, F. Vancutsem	Stability of the marc content of sugar beet varieties in different environments
1.42	Musidłowska-Persson A., H. Renard	On-field determination of POL sugar using Near Infrared Spectroscopy

2 Genetic progression, phenotyping

2.1	Arakawa T.	Molecular genetic interaction of cytoplasmic male sterility in sugar beet
2.2	Kozak-Stankiewicz K., K. Wróblewska, J. Nocén, S. Karpinski, M. Szechynska-Hebda, A. Sitarski	Effect of LED light pretreatment of sugar beet donor plants on haploid embryos induction
2.3	Pegot-Espagnet P., B. Desprez, B. Devaux, P. Devaux, K. Henry, N. Henry, G. Willems, E. Goudemand, B. Mangin	Original genetic diversity discovery comparing a sugar beet elite reference panel with progenies from (sugar beet elite x exotic) crosses
2.4	Taski-Ajdukovic K., N. Nagl, M. Ciric, Z. Curcic	Prediction of sugar beet hybrid performance and heterosis using genetic distance estimated with SSR markers
2.5	Ciric M., Z. Curcic, G. Jacimovic, M. Mirosavljevic, N. Nagl, K. Taski-Ajdukovic, S. Prodanovic	AMMI analysis of genotype by environment interaction of sugar beet hybrids grown in different fertilizer treatments
2.6	Rajabi A., M. Aghaeizade, S. Ebrahimi Souteh, S. Bagher Mahmoudi	Genetic variation for early maturity in sugar beet half-sib families
2.7	Trigui G., L. Le Corre, M.L. Avrillon, M. Ghali, A. Charrier	Development of a protocol to use X-ray microtomography imaging as a phenotyping tool for sugar beet seed
2.8	Rasti P., E. Belin, D. Demilly, S. Ducournau, C. Dürr, F. Chapeau-Blondeau, D. Rousseau	A computer vision tool for a high-throughput phenotyping of seedlings during elongation – application to sugar beet
2.9	Comar A., D. Dutartre, J. Beauvois, N. Henry, S. Thomas, B. de Solan, S. Madec, F. Baret	Sugarbeet field phenotyping from the PHENOMOBILE-LV
2.10	Comar A., D. Dutartre, N. Henry, F. Baret, J. Beauvois, M. Hemmerlé, F. Maupas	Assessment of genotypes resistances to Cercospora from multispectral UAV measurements
2.11	Mahlein A.-K., R. Roscher, J. Dupuis, S. Paulus, H. Kuhlmann, J. Behmann	Hyperspectral 3D plant models of sugar beet

3 Pest, disease and weed challenges

Fungal leaf diseases

3.1	Hansen A.L., T. Marten Heick, A. Fejer Justesen, L. Munk, R. Labouriau, K. Wu, L. Nistrup Jørgensen	Leaf disease control in sugar beet performed early before appearance of visual symptoms and detection of fungal spores using spore traps and QPCR
3.2	Marten Heick T., A. Fejer Justesen, A.L. Hansen, L. Nistrup Jørgensen	Spore trapping of fungal leaf diseases of sugar beet in Denmark
3.3	Varraillon T. et al.	A climatic modeling of four sugar beet diseases (Cercospora, Erysiphe, Uromyces, and Ramularia) using neural network procedures of the date of exceeding the threshold triggering the first fungicide application (T1)
3.4	Huet W.	Cercospora model developed in CRISTAL UNION. Presentation of 5 years of experimentation and development
3.5	Khan M.	Using old tools to control new forms of *Cercospora beticola*
3.6	Rivera-Varas V., M. Bolton, G. Secor	Comparative sensitivity of *Cercospora beticola* to multiple DMI fungicides
3.7	Kimmel J., L. Potyondi, F. Csima	Testing sugar beet varieties under artifical infected conditions with *Cercospora beticola*
3.8	Piszczek J., E. Moliszewska, M. Łukomski	The economics of different programs of Cercospora control of sugar beet with different resistance level
3.9	Kempl F.	Control of resistant Cercospora Leaf Spot
3.10	Bryson R., J. Bruns, D. Uerkvitz, E. Ardissone, S. Babinet, J.-F. Meynet, P. Lacroix	Fungicide resistance combined with EU legislation put sugar beet production at risk
3.11	Blanc F.	Amistar Gold – a new sugar beet fungicide, and M280, a new multisite fungicide as a response to *Cercospora beticola* resistance
3.12	Bukvic-Lukinic D., A. Babic, D. Budakov, V. Stojšin, F. Bagi, M. Grahovac	Efficacy of mancozeb and tetraconazole in control of *Cercospora beticola* of known sensitivity to tested fungicides
3.13	Campagna G., A. Fabbri, A. Vacchi, D. Rosini, M. Zavanella	Integrated strategies for protecting the foliage
3.14	Hanse B., E. van Oorschot, J. Schoone	Management of *Stemphylium beticola* in sugar beet in the Netherlands

Root rot diseases

3.15	Hassani M., B. Heidari, P. Stevanato, G. Campagna, C. Broccanello, P. Nourozi, G. Concheri, L. Panella	A candidate single nucleotide polymorphism (SNP) marker linked to resistance to infection with rhizoctonia in sugar beet
3.16	Nottensteiner M., R. Apfelbeck, S. Steinberger, H. Maier, J. Maier, M. Zellner	Development of a routine method for *Rhizoctonia solani* AG2-2IIIB inoculum density determination from arable soils
3.17	Richard B., M. Verger, C. Steinberg	Field trials design to assess sugar beet varieties resistance to *Rhizoctonia solani*: results from the R2B project
3.18	Stojšin V., F. Bagi, V. Crnojević, A. Stankov, B. Ivošević, D. Budakov, Ž. Ćurčić	Comparative analysis of drone photogrammetry and standard phytopathological methods in evaluating sugar beet root diseases
3.19	Bartholomäus A., S. Schulze, S. Mittler, H.-J. Koch, B. Märländer, M. Varrelmann	Effects of sugar beet cultivar, crop rotation and fungicide treatment on *Rhizoctonia solani* concentration in field soils
3.20	Thiery-Lanfranchi D., E. M. Inokuti, V. Edel-Hermann, N. Gautheron, B. Richard, C. Steinberg	Pathogenic variability and genetic characterization of *Rhizoctonia solani* AG-2-2 causing crown and root rot on sugar beet in France
3.21	Kreitzer C., H. Eigner	Five year of microbial cover crop coating towards Rhizoctonia affliction in sugar beet
3.22	Apfelbeck R., H.-J. Koch, A.C. Renner, S. Schulze, G. Simeth, G. Wagner, J. Maier, M. Zellner	Integrated control-strategies against *Rhizoctonia solani* in sugar beets – Influence of soil preparation and previous crop
3.23	Knight T.	Vibrance® SB – a new broad-spectrum fungicide seed treatment for sugar beet
3.24	Varrelmann M., D. Christ, A. Schechert, W. Beyer, H. Uphoff, H. Tschoep, K. Bornemann, A. Windt, G. Schlinker	Attempts for the development of violet root rot infection bioassay in the greenhouse and field with *Helicobasidium purpureum* inoculation
3.25	Turakainen M., S. Muurinen	Can we affect Aphanomyces by increasing Ca fertilizer?
3.26	Ripa L., B.-L. Lennefors	A method for evaluation of tolerance to *Macrophomina phaseolina* in sugar beet

3.27	Stankov A., V. Stojšin, D. Budakov, Ž. Ćurčić, J. Medić, F. Bagi, N. Nagl	Characterization of *Macrophomina phaseolina* (Tassi) Goid. isolates from sugar beet in Serbia, based on chlorate phenotypes and pathogenicity
3.28	Nagl N., K. Taški-Ajduković, D. Budakov, V. Stojšin	Estimated genetic variation in *Macrophomina phaseolina* from sugar beet using SSR markers
3.29	Stojšin V., A. Stankov, J. Medić, D. Budakov, G. Jaćimović, M. Ćirić, Ž. Ćurčić	Influence of NPK mineral nutrition and cultivar on sugar beet root rot
3.30	Kaffka S., W. Wintermantel, R. Lewellen	A visual scale for rating damage and loss to beet vascular necrosis occurring in California
3.31	Boehm D., E. De Bruyne, M. Metzger, G. Secor, V. Rivera, S. Kaffka	Screening methodology for *Pectobacterium* subspecies in sugar beets
3.32	Kremer P., C. Lang, H.-J. Fuchs	Sugar beet growth under climate change – challenges and potentials?!

Beet pests

3.33	Schremser M., F. Kempl	Beet moth – an issue under dry conditions
3.34	de Zinger L., E. Raaijmakers, M. de Korte, D. Doornheijn	Towards beet fly monitoring predicting optimal foliar insecticide application(s) to prevent damage by the beet leaf miner
3.35	Wenninger E.J., T.B. Daley	Screening for host resistance against the sugar beet root maggot, *Tetanops myopaeformis* (Diptera: Ulidiidae), using a greenhouse bioassay
3.36	Molthan M., J. Wießner, H.-W. Roth, B. Holtschulte	Characterization of nematode occurrence on a regional level by different approaches of nematode detection
3.37	Wright A., M. Stevens, M. Back, D. Sparkes	Beet Cyst Nematode: Interactions between *Heterodera schachtii* and sugar beet
3.38	Bodner G., M. Alsalem, G. Sigl, H. Eigner	Are sugar beet root systems different between genotypes with variable nematode susceptibility?
3.39	Koch H.-J., M. Hauer, S. Mittler, A. Windt, S. Krüssel	Effect of sugar beet variety type on population dynamics of *H. schachtii* and sugar beet yield in northern Germany 2013-2015
3.40	Olsson Å., L. Persson	Free living nematodes in sugar beet – damage thresholds and options for control
3.41	Zavanella M., D. Rosini, A. Vacchi, G. Campagna	Evolution of soil fertility and health status (*H. schachtii*) in the Coprob districts
3.42	Raaijmakers E., L. de Zinger, J. Schoone, E. van Oorschot	Effect of new cover crops and mixtures on multiplication of *Heterodera schachtii* and *H. betae* in climate room trials as a measure within ecological focus areas (EFA'S)
3.43	Nowakowski M., P. Skonieczek, L. Matyka, M. Zurek	The impact of cultivating new white mustard lines and selected sugar beet cultivars on the *Heterodera schachtii* population in black earth
3.44	Turakainen M., S. Muurinen	Beet cyst nematode density in Finnish sugar beet soils

Virus diseases

3.45	Behnke N., W. Beyer, A. Loock	Yellowing viruses in sugar beet
3.46	Boyer F., F. Maupas	Durable plant protection strategies without neonicotinoids
3.47	Liebe S., J.F. Gil, E. Savenkov, E. Maiss, M. Varrelmann	*Beet necrotic yellow vein virus* and *Beet soil-borne mosaic virus* – how close is the relationship?

Challenges and solutions in weed control

3.48	Morishita D.W., J. Felix, P. Jha, A.R. Kniss, N. Lawrence, T.J. Peters, C.L. Sprague	Glyphosate-resistant sugar beet in the US: a weed science perspective
3.49	Kerckove P., S. Decouvelaere.	An autonomous solar robot for weed control
3.50	Wegener M.	Conviso ONE – efficacy against hard to control weeds and evaluation of the soil activity

4 Open topics

4.1	Raaijmakers E., B. Hanse, M. Leijdekkers, F. Tijink	New facilities make sugar beet research at IRS ready for the future
4.2	Smit A.B., R.A. Jongeneel, G.C. van Kooten	Price and market effects of quota abolishment and coupled support
4.3	Jeche U., U. Bedenk	Sugar beets (KWS Feedbeet) – a new and energy rich feedstuff for cattle feeding