IIRB
INTERNATIONAL INSTITUTE OF SUGAR BEET RESEARCH

77TH IIRB CONGRESS – 11-12 FEBRUARY 2020
POSTER PROGRAMME

1 Agronomy

Nutrient supply

01	G. Campagna, M. Sandona	Sugar beet and other crops in rotation sustainability cultivation (Carbon footprint) in Italy
02	P. Götze, H.-J. Koch	Effect of crop rotation and removal of beet leaves and tops on soil organic carbon stocks in the crop rotation experiment at Harste
03	G. Bodner, H. Eigner, D. Horn, S. Geyer, K. Keiblinger	EUF soil extraction for the determination of structure-relevant organic carbon fractions
04	A. Stracke, H.-J. Koch	Above- and below-ground biomass and N uptake of catch crops affecting soil N_{min} over winter
05	D. Horn, G. Müller	Challenges of nitrogen and phosphorus fertilization advice for sugar beets with regard to the implementation of the EU Nitrates Directive
06	M. Zavanella, M. Cenacchi, D. Rosini, G. Campagna	Survey on soil fertility in the Coprob beet communities: second contribution
07	J. Ekelöf	Decreasing soil P and K reserves – a hidden threat to improvements in sugar beet yields
08	Å. Olsson Nyström, L. Persson, J. Blomquist	Structure lime and ground limestone in sugar beet rotations
09	S. Malmilehto	Structural liming in Finland
10	S. Muurinen	Survey of sulfur status of sugar beet in Finland

Tillage

11	J. Przybył, N. Mioduszewska, I. Kowalik	Analysis of simplified tillage systems in sugar beet production in the aspect of yield quantity and quality
12	N. Mioduszewska, J. Przybył, K. Pilarski	Analysis of simplified tillage systems in sugar beet production in the aspect of soil physical properties
13	R. Duval, V. Tomis	Soil compaction in northern France sugar beet crop systems: a collaborative study to give a clear picture of the situation and identify solutions

Seed quality, sowing and early establishment

14	S. Ducournau, A. Wauters	Testing *Beta vulgaris* seed quality in laboratory to predict field emergence
15	J. Long, R. Marcinek, J. Brooks	Improving young plant growth with seed technologies
16	H. Ebmeyer, C. Hoffmann	Reasons for the strong effect of drought stress in young sugar beet plants
17	L. Tillier	The impact of canopy architecture on radiation use efficiency and yield potential of sugar beet
18	C. Hoffmann	Can yield of sugar beet varieties be assessed by the leaf canopy?
19	M. Zavanella, G. Campagna, A. Vacchi, A. Fabbri	Feasibility study of autumn sowing in the Coprob districts (Italy)
20	M. Aghaei, M. Honarvar, M. Bazrafshan	Autumn sugar beet cultivation in Iran: challenges and opportunities

Organically grown sugar beet

21	A. Lorriaux, B. Jacobs, M. Brandt, B. Dequiedt, B. Vandamme	Challenges and opportunities of organic sugar beet seed production for SESVanderHave
22	M. Cenacchi, G. Campagna, M. Zavanella, D. Rosini	Organic sugar beet cultivation in Italy – first experience on field
23	O. Nielsen	Three-year experience with organic sugar beets

Comunication/Benchmarking

24	C. Roß, K. Trimpler, N. Stockfisch	Communication of data from a farm survey
25	N. Stockfisch, C. Roß, A.-K. Mahlein	Comparison of indicators for pesticide use intensity

Digital technologies

26	F. Joudelat, D. Dutartre, S. Madec, E. David	Measuring vegetative heterogeneity of sugar beet varieties with drone and deep learning phenotyping
27	T. Ekblad	Automatic image analysis of sugar beet – a deep learning approach
28	G. Campagna, A. Fabbri, M. Bassi, A. Bresolin	Monitoring water-nutritional and NDVI on sugar beet in Italy
29	U. Wilczek	Development of a sensor system for low-damage sugar beet harvest – state and perspectives

Harvest, storage, and beet quality

30	A. Andrusiak, Z. Wyszyński	Evaluation of sugar beet yield depending on the method and harvesting date
31	C. Kenter, E. Ladewig	Storability as a varietal characteristic of sugar beet?
32	M. Leijdekkers	Experiences with mechanical ventilation of sugar beet storage clamps in the Netherlands
33	S. Malmilehto	Fleece cover for sugar beets. Risk or possibility?
34	N. Nause, C. Hoffmann	Cambium rings and cell wall composition of sugar beet genotypes differing in root strength
35	W. English	In season texture analysis of sugar beets using a handheld penetrometer
36	M. Nilsson	Pressure mapping of sugar beets
37	E. Hilscher, H. Narten, S. Meldau	Opportunity to improve sugar beet quality lab sample measurement and analysis quality using the BEETROMETER™

2 Pest, disease and weed challenges

Root rot diseases

38	L. Persson	Measurement of Aphanomyces root rot potential in soil
39	J. Vegas, E. De Bruyne, I. Adetunji, O. Amand	Genetic study of charcoal rot (*Macrophomina phaseolina*) resistance in sugar beet using a diverse panel of commercial and non-commercial hybrids
40	V. Stojšin, D. Budakov, Ž. Ćurčić, A. Stankov, T. Dudaš, F. Bagi, N. Nagl	Influence of NPK mineral nutrition and cultivar on sugar beet root rot
41	A. Stankov, N. Nagl, V. Stojšin, D. Budakov, F. Bagi, T. Dudaš, M. Isakov	Characterization of *Trichoderma* spp. for antagonistic activity against charcoal root rot *Macrophomina phaseolina* from sugar beet

Fungal leaf diseases

42	D. Budakov, V. Stojsin, Z. Curcic, T. Dudas, A. Stankov, F. Bagi, M. Grahovac	Influence of sugar beet cultivar and NKP nutrition on Cercospora leaf spot
43	Ž. Ćurčić, D. Budakov, A. Stankov, K. Taški-Ajduković, N. Nagl, V. Stojšin	Effect of different sowing dates on *Cercospora beticola* infection level
44	M. Vanderstukken, J. Sels, O. Amand, D. Boehm, H. Tschoep	An integrated breeding approach towards Cercospora resistant varieties – a perspective from SESVanderHave
45	M. Khan, G. Campagna	Strategic management of *C. beticola* using improved resistant cultivars of sugar beet

46	A. Barreto, S. Paulus, A.-K. Mahlein	Proof of concept for the digital visual rating of Cercospora leaf spots using multispectral UAV images
47	M. Müllender, M. Varrelmann, G. Stammler	Possible causes and mechanisms for alterations in the sensitivity of *Cercospora beticola* towards DMI fungicides
48	T.M. Heick, A. Fejer Justesen, L. Nistrup Jørgensen, A.L. Hansen	Disease control and management of QoI resistance of sugar beet powdery mildew (*Erysiphe betae*) in Scandinavia

Beet pests

49	G. Campagna, A. Vacchi	*Lixus junci* and *Conorrhinchus mendicus* diffusion on sugar beet in Po Valley and control strategy
50	M. Mayrhofer, F. Kempl, H. Eigner	Sugar-beet weevil (*Bothynoderes punctiventris*) – Investigations on the efficacy of insecticides in model trials
51	Z. Klukowski, J. Piszczek	Biological aspects of Sugar Beet Weevil control – Polish experience of 2014-2019 outbreak
52	G. Malatesta, W. Huet	Increase of the weevil population in France
53	A. Olsson Nyström	Free living nematodes and root gall nematodes in sugar beet

Growing sugar beet in a post-neonic world

54	C. Royer, C. Gouwie, F. Boyer, F. Maupas	The aftermath of the neonicotinoid ban in France: first lessons and new perspectives
55	F. Kempl, K. Wechselberger	Efficacy of seed treatments with and without Neonicotinoids
56	N. Wynant, I. Munnery, J. Sels, H. Liesse, G. Willems, J. Vegas, E. de Bruyne, O. Amand, H. Tschoep	An integrated breeding approach to develop insect tolerant varieties at SESVanderHave
57	L. Frijters, E. Raaijmakers, L. de Zinger	Testing alternative pesticides and monitoring systems for the control of pygmy mangold beetles (*Atomaria linearis*) under field conditions
58	K. Antoons, F. Vancutsem	Optimizing of pest management in Belgium thanks to the observation and warning network
59	R.H.M. Wouters, R. Biello, S.T. Mugford, E. de Bruyne, F.-J. Bulthuis, I. Munnery, R. Robinson, N. Wynant, G. Willems, D.G.O. Saunders, S.A. Hogenhout, T.C. Mathers	Global diversity of the sugar beet aphid pest *Myzus persicae*
60	E. Raaijmakers, F.-J. Bulthuis, N. Wynant, E. De Bruyne, J. Luimes	Monitoring of aphids in sugar beet fields and trial fields, a basic tool to understand virus yellow epidemics in the post neonic era
61	L. de Zinger, E. Raaijmakers	Virus yellows host status of weeds and green manure crops transmitted by *Myzus persicae*
62	R. Hossain, W. Menzel, M. Varrelmann	Virus yellows in sugar beet – biology, occurrence and influence on yield parameters
63	D. Budakov, V. Stojsin, Z. Curcic, T. Dudas, N. Nagl, F. Bagi, M. Grahovac	Sugar beet virus diseases in Serbia
64	Ž. Ćurčić, Ž. Milovac, K. Taški-Ajduković, A. Stankov, A. Radonjić, O. Petrović-Obradović, B.L. Lennefors	Beet Yellow Virus a possible threat to sugar beet production in Serbia?

Virus resistance breeding, variety testing

65	L. James	A novel pre-breeding strategy to reduce dependence on insecticides for virus yellows control in sugar beet – A final update
66	A. Wright, M. Stevens, E. Murchie, D. Sparkes	Phenotyping varietal responses of sugar beet to virus yellows, beet cyst nematode and foliar diseases

67	C. Nilsson, T. Kraft, B.-L. Lennefors	Successful breeding for resistance/tolerance to virus yellows at MariboHilleshög
68	K. Okazaki, Y. Kuroda, K. Takashino, H. Matsuhira, S. Ueda	Resistance breeding to virus yellows in Japan
69	Y. Kuroda, K. Okazaki, K. Takashino	QTL analysis of resistance to Beet leaf yellowing virus (BLYV)
70	N. Behnke, W. Beyer	Breeding for virus yellows resistance – a new success story?
71	M. Rekoske, H. Friehe, J. Miller	Betaseed: 50 Years of innovation – a company looking to the future
72	C. Kenter, P. Götze, E. Ladewig	Effects of sample size and head rows on the precision of variety trials in sugar beet
Other pests and disease issues		
73	L. Potyondi	Challenges of non-renewal of approval of pesticides in Hungarian sugar beet production
74	L. Holmquist, S. Mittler, J. Fernando Gil, R. Johnsson	Syndrome Basses Richesses (SBR) in Sugar beet – crop robustness as a potential element for control
75	A. Wauters	Silvering disease in sugar beet caused by *Curtobacterium flaccumfaciens* pv. *betae* in Belgian sugar beet trials
Rhizomania		
76	C. Chiodi, C. Broccanello, P. Stevanato, G. Campagna, L. Treu, M. Moro, G. Bertoldo, M.C. Della Lucia, S. Ravi, L. Maretto, S. Campanaro, G. Concheri, A. Squartini	Bacterial community composition in a soil carrying a resistance-breaking strain of the rhizomania virus BNYVV in comparison to standard soils
77	S. Liebe, E. Maiss, M. Varrelmann	Application of a reverse genetic system for Beet necrotic yellow vein virus to study Rz_1 resistance breaking in sugar beet
78	V. Wetzel, M. Varrelmann	Rz_2 – a plant anti Beet necrotic yellow vein virus resistance protein derived from *Beta vulgaris* targets the viral movement-protein TGB1 as avirulence gene
Weed control		
79	D. Laufer, E. Ladewig	Weed control in sugar beet without the active substances desmedipham and phenmedipham
80	S. Geyer, F. Kempl, H. Eigner	Weed control missing des- and phenmedipham
81	S. van der Heijden, E. Raaijmakers, I. Wijgergangs	Effectiveness of ALS-herbicides registered for cereals to control ALS-tolerant and ALS-non-tolerant weed beets
82	C. Stibbe, M. Klie, W. Wegener	Conviso® Smart – experiences of the first two years in practice
83	D. Hyndrikx, X. Sauvenier, N. De Temmerman	Performance of Conviso® Smart sugar beet varieties under different weed control strategies
84	J. Kimmel	Experiences with Conviso Smart technology in field trials in Hungary
85	M. Palomäki	Farmers' opinions about the Conviso Smart system in Finland
86	M. Palomäki	Tips of the use of Conviso Smart in Finland
87	M. Khan	Experiences and lessons learned from a decade of using herbicide tolerant sugar beet in the USA
88	C. Royer	Weeds resistant to chemical herbicide
89	R. Euben	How to use drift reducing spray nozzles and maintaining good weed control