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79TH IIRB CONGRESS

27 - 28 February 2024

**Innovation:
our driver for a profitable
and ecologically balanced
sugar beet production**

**Hotel Le Plaza
Brussels, Belgium**

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Programme

Tuesday 27th February 2024

- 8.30 am General Assembly of IIRB members
9.20 am JAN WILLEM VAN ROESSEL:
Presidential address

1 Reviewing innovative weed control approaches

(Chair: ANNE LISBET HANSEN, NBR)

- 9.30 am PETER RISSER (Südzucker): Digitalisation in weed control using AI and robotics – results from an integrated field trial design in sugar beet
9.50 am OLIVER SCHMITTMANN (Univ. of Bonn): Development of a method for testing weeding-technologies in field, using the quality determination of spot-sprayer as an example
10.10 am OLGA FISHKIS (IfZ): Holistic assessment of sustainability, procedural and economic efficiency of conventional and novel weed control techniques
10.30 am Coffee break

2 Leaf disease forecast and management

(Chair: SEBASTIAN LIEBE, IfZ)

- 11 am NATHAN WYATT (USDA-ARS): Understanding the complete disease cycle of *Cercospora beticola*, progress towards a comprehensive *Cercospora* leaf spot forecasting model
11.20 am FRANÇOIS JOUDELAT (ITB): CERCOCAP: Managing *Cercospora* with modelling and IoT cameras
11.40 am BRAM HANSE (IRS): Innovation for a profitable and ecologically balanced management of foliar diseases in sugar beet
12.00 pm ABEL BARRETO (IfZ): Site-specific leaf disease management in sugar beet fields based on high resolution multispectral UAV imagery
12.20 pm Lunch break

3 Managing insect-related threats

(Chair: ELMA RAAIJMAKERS (IRS))

- 1.30 pm BOJAN DUDUK (Institute of Pesticides and Environmental Protection): Phytoplasmas infecting sugar beet in central Europe

- 1.45 pm PIERRE LONGERSTAY (SESVanderHave): Stolbur – an additional challenge in sugar beet growing associated to syndrome basses richesses (SBR)
2 pm SVENJA BÄNSCH (KWS), MARIA KÖHLER (Strube Research): Presence, life cycles and monitoring of soil insect pests to better understand possibilities for control
2.15 pm LINDA GEENEN-FRIJTERS (IRS): The efficacy of new seed treatments to control *Atomaria linearis* and other soil pests in sugar beet
2.30 pm CORENTIN SOCHARD (ITB): New insights on the sugar beet weevil *Lixus juncii*
2.45 pm **Poster session I** and coffee break

4 Alternative pest control / IPM

(Chair: MARION SEITER, ARIC)

- 4 pm NIKA JACHOWICZ (NBR): Conservation biological control potential in sugar beet fields in Denmark
4.15 pm CHLOÉ DUFRANE (IRBAB): Companion plants to control pests in sugar beets
4.30 pm BENEDICT WIETERS (IfZ): FlowerBeet: biological control of aphids by beneficial insects through integrated flowering strips
4.45 pm SHARELLA SCHOP (WUR): Mature plant resistance in sugar beet
5 pm End of day 1
7.30 pm Reception and congress dinner

Wednesday 28th February 2024

5 Breeding approaches for virus yellows control

(Chair: FABIENNE MAUPAS, ITB)

- 8.30 am MARIO SCHUMANN (KWS): European wide monitoring of yellowing viruses and its implications for testing new virus yellows control strategies
8.45 am MARINE CORDONNIER (Florimond-Desprez): Flavie – a collective, multi-stakeholder effort to propose varietal solutions against virus yellows
9 am MICHAEL STANGE (Strube Research): The breeding challenge of our time: yellowing viruses

- Research and breeding for VY resistance and tolerance
9.15 am JULIA BENGTTSSON (DLF Beet Seed): Research and breeding for resistance and tolerance to virus yellows

- 9.30 am SUZANNAH HARDER (Univ. of East Anglia): Strain variation in virus yellows and consequences for future virus resistant/tolerant varieties

- 9.50 am **Poster session II** and coffee break

6 Resistance potential of beet genetic sources

(Chair: HENDRIK TSCHOEP, SESVanderHave)

- 11.30 am FELIX L. SANDELL (BOKU): Genomic analysis of wild and cultivated beets
11.45 am KEVIN DORN (USDA-ARS): Beet crop wild relative germplasm mining uncovers new sources of disease resistance
12 pm LUKAS ROLLWAGE (IfZ): Virus yellows disease in sugar beet – resistance mechanism for the future
12.15 pm RAJTILAK MAJUMDAR (USDA-ARS): Genome, transcriptome, and metabolome analyses reveal distinct metabolic alterations in ethyl methanesulfonate (EMS) mutant sugar beet breeding lines resistant to rhizomania
12.30 pm Lunch break

7 Advances in agronomy

(Chair: ANDRÉ WAUTERS, IRBAB)

- 1.40 pm DENNIS GRUNWALD (IfZ): Soil carbon dynamics under sugar beet cultivation – what do we really know?
2 pm MARISOL CAMPOVERDE (ARTB), RÉMY DUVAL (ITB): How can sugar beet crop management contribute to improve the field cropping systems carbon footprint
2.20 pm JENS LOEL (Betaseed): Innovative seed treatment solutions for future-proof sugar beet growing
2.35 pm THOMAS LEBORNE (ITB): PREVIBEST: apprehend the risk of soil compaction during beet harvest
2.55 pm WILLIAM ENGLISH (NBR): Modelling sugar beet clamp temperature
3.15 pm Closing words
3.20 pm End of congress