

Several study group meetings and a workshop were organised by the IIRB in autumn 2018 and spring 2019. This newsletter gives a short report of the different activities.

SG PESTS & DISEASES

4-5/9/2018, Dinteloord (NL)

36 group members met at the two-day meeting to present current research on *Cercospora*, sugar beet viruses, *Rhizoctonia solani* and nematodes, but also to report on newly emerging diseases like silvering in sugar beet caused by *Curtobacterium flaccumfaciens* pv. *betae*, and the Syndrome Basses Richesses (low sugar content syndrome), caused by a phytoplasm and proteobacterium and transmitted by a phytophagous planthopper.



Elma Raaijmakers (IRS) and Mark Varrelmann (IfZ), vice-chair and chair of the Pests & Diseases study group, discussing with study group meeting participants at Dinteloord

SG PLANT & SOIL

12-13/11/2018, Norwich (UK)

The 15 participants were welcomed at the British Beet Research Organisation BBRO and were presented BBRO's current research projects on sugar beet canopy architecture and water use efficiency. Further talks dealt with the effects of reduced tillage in sugar beet, experiences with ALS-tolerant sugar beets, and the impact of cover crops on soil structure, yield, nitrogen supply and growth of the succeeding crop. A field visit to Morley Agricultural Foundation and BBRO trials rounded off the two-day programme.

SG SEED QUALITY & TESTING

5-6/11/2018, King's Lynn (UK)

The group met at the company Germain's for their annual meeting. They were introduced to UK seed biology research by Steven Penfield of the John Innes Centre and had the opportunity of visiting the Germain's testing laboratories and automated germination machine. During the meeting, the results of a comparative trial on germination/vigour tests were presented and discussed as well as new research results on the storage of primed pelleted sugar beet seeds.

NEONIC GROUP MEETINGS AND WORKSHOP

7-8/03/2019, Leuven (B)

Due to the difficult situation for pest and virus yellows control following the limitations in the use of neonicotinoids the collaboration of the European sugar beet research institutes was enhanced. A newly established IIRB project group met three times in autumn 2018 and spring 2019 to discuss the current situation, to improve aphid monitoring and to analyse alternative solutions for insect control.

The group also organised a workshop 'Growing sugar beet without neonicotinoid seed treatments', chaired by Mark Stevens (BBRO), Elma Raaijmakers (IRS), and Mark Varrelmann (IfZ), to which 14 international speakers from different research institutions were invited. They gave an overview on current and future options for the control of soil pests, leaf miners and virus-carrying aphids.



Mark Stevens (BBRO) introducing the workshop 'Growing sugar beet without neonicotinoid seed treatments'



The first session highlighted alternative control approaches with root-colonizing insecticidal and entomopathogenic fungi, and an attract & kill approach. Natural control of pests in arable crops may be supported by flower strips and landscape measures. For an effective aphid control, the monitoring of populations becomes again increasingly important. Several complementary aphid control strategies were presented that require further development.

The second session informed about breeding activities towards a resistance of sugar beet against virus yellows, with the aim to reduce the dependence on insecticides for virus yellows control.

The third session on chemical alternatives reviewed active ingredients currently still available in Europe for use against insect pests in sugar beet and highlighted existing insecticide resistance against some of these ingredients.

The workshop, attended by 85 participants, was very much appreciated by the audience and with its broad overview on measures to be further developed for a pest control without neonicotinoids gave food for thought and provided opportunities for future collaboration.

SG COMMUNICATION TECHNIQUES

15/5/2019, Bery en Santerre (F)

After several changes in members in the past year the group met again on the occasion of Désherb'Avenir in France to discuss ways to improve the communication of research results to both farmers and the public. Hélène Dorchie (ITB), nominated new chair of the group at the meeting, presented the communication targets of ITB. Jurgen Maassen (IRS) continued by demonstrating IRS's efforts in closing the yield gap between the potential and the realized sugar beet yield. The group will invite external communication specialists to future group meetings to improve techniques of communication.



IIRB study group participants analysing the quality of weed control trials during field demonstrations at Désherb'Avenir in Bery en Santerre, France.

SGS WEED CONTROL/AGRICULTURAL ENGINEERING

16/5/2019, Bery en Santerre (F)

On the occasion of Désherb'Avenir, the French field demonstration of mechanical and combined weed control, the two groups met at Bery en Santerre, both participating at a guided tour of the demonstration. Presentations at the Weed Control meeting concentrated on the increasingly limited availability of active ingredients for weed control. New weed control approaches with chemical, mechanical, thermal and electrical methods as well as the use of robots were presented during the joint meeting part. The Agricultural Engineering group discussed the advantages of placed fertiliser applications and planned the programme for the upcoming IIRB seminar 'Sensors and Digital Technologies'.

SEMINAR 'SENSORS AND DIGITAL TECHNOLOGIES'

17/12/2019, Jülich (D) – **New date!**

Innovative technologies like optical sensors, gis/gps, remote sensing, robotics, and machine learning are more and more implemented in agricultural practice and applied in smart farming, precision farming and plant phenotyping. At the planned seminar, the IIRB will bring together experts from digital technologies and smart farming with the sugar beet sector to demonstrate and discuss the opportunities, challenges and research demands for an implementation of sensors and digital technologies in sugar beet production. The seminar will be held at the Research Centre Jülich (D) on 12/12/2019 – further information will follow soon.

77TH IIRB CONGRESS

11-12/02/2020, Brussels (B)

The IIRB is planning its 77th IIRB Congress, to be held in Brussels. The IIRB congress will present topical issues in sugar beet in around 25 oral and 100 poster contributions. For the technical sessions, the IIRB welcomes scientifically-based contributions from all areas of sugar beet growing, focusing on innovative approaches, products, technologies, and new methodologies. **Please hand in proposals online at www.iirb.org by 15/9/2019.** Based on the returned proposals, the programme will be established in October and sent together with registration information in November 2019. We look forward to meeting you in Brussels!

IIRB MEETINGS AGENDA

SG Genetics & Breeding	16-17/9/2019, Norwich (UK)
AC/SAC meeting	1/10/2019, Düsseldorf (D)
SG Seed Quality & Testing	5/11/2019, venue to be confirmed
SG Weed Control	12/2019, Tienen (B)
IIRB seminar 'Sensors and digital technologies'	17/12/2019, Jülich (D)
77 th IIRB Congress	11-12/2/2020, Brussels

