



FORUM BETA- SOL

01 + 02 SEP. 2026

Field Day, „Knollendialog“ & Conference

UNDERSTANDING **PRACTICE.**
RECOGNIZING **IMPACTS.**
MAKING **DECISIONS.**

The leading forum and field day event for practice, policy, advisory services, research & industry focused on the planthopper *Pentastiridius leporinus*.

 Under the Patronage of the Federal Ministry of Agriculture, Food and Regional Identity, Mr. Alois Rainer.

 Worms



REGISTER NOW: WWW.BETASOL.INFO

WHY BETASOL

Where practical experience meets research and political options for action.



WHAT OUR PROGRAM OFFERS



Direct insights

Understand damage symptoms, crop development and the need for action directly on site.



Scientific evidence

Current research presented in a well-founded, understandable and practice-oriented way.



Political dialogue

Exchange on options for action, framework conditions and future strategies.



Strong network

Connect with researchers, associations, advisory services, industry representatives, and practitioners from Germany and abroad.

THREE STRONG MODULES — ONE GOAL



FIELD DAY

01. SEP. 2026
Hagenbräu, Worms



KNOLLEN- DIALOG

01. SEP. 2026 · 19 – 22 P.M.
Hagenbräu, Worms



CONFERENCE

02. SEP. 2026
Das Wormser, Worms



“BetaSol makes impacts visible, connects stakeholders and provides concrete impulses for informed decision-making.”

FURTHER INFORMATION: WWW.BETASOL.INFO



PROGRAM

FIELD DAY & KNOLLENDIALOG

01. SEP. 2026

The first day of the event combines real field insights with expert technical classification and offers many opportunities for personal exchange.



REGISTRATION · 10:30 A.M.
Hagenbräu · Am Rhein 3 · 67547 Worms



WELCOME · 11:30 A.M.



BUS TRANSFER
Included in the price



VISIT TO THE TRIALS
Topics see following page



BUS TRANSFER
Back to Hagenbräu



KNOLLENDIALOG & DINNER · 19:00 P.M.



WHAT THE FIELD DAY OFFERS



Guided small groups through the trial area



Discussion directly on site



Management strategies, technologies, & crops under real farming conditions.



Practice-oriented exchange



WHY THE FIELD DAY IS WORTHWHILE

Hands-on practice. Real crop stands instead of slide presentations. Direct learning in the field — where questions become visible and solutions become tangible.



Meeting point: Hagenbräu
Am Rhein 3 · 67547 Worms



Number of participants is limited



Registration at:
www.betasol.info

FOCUS ON SUGAR BEET



The sugar beet field stations provide practical insights into how the planthopper *Pentastiridius leporinus* affects yield, quality, and secondary infections — and highlight integrated measures that can sustainably reduce infestation pressure.

WHAT TO EXPECT

1 Practical approaches in the field KumbIT

Which measures can farms implement specifically to reduce planthopper pressure? This station presents practice-oriented approaches to crop rotation and cover-crops. Various crops such as maize, soybean, millet, and oilseed radish are compared with regard to their effect.

3 Variety trials: Variety selection remains a key management tool ARGE

Variety choice is a central component in dealing with SBR. Recent developments in SBR-tolerant, healthy-foilage, and high-performing sugar beet varieties will be shown. You will receive a compact overview of new genotypes, performance differences and the importance of choosing the right variety.

5 EffectorSelect IFZ Göttingen

Experience current cutting-edge research: The station shows how effectors of SBR pathogens are identified in order to select tolerant sugar beet varieties more specifically. Field trials, net inspections and molecular analyses demonstrate how research supports concrete progress in breeding.

2 Agro Reel System

BSE YMOND BV

The demonstration of mechanical net covering in potatoes shows how nets can in future be laid out and collected again in a time-saving, efficient and crop-friendly way. You will see directly in the field how modern technology can support crop protection.

4 Yield and secondary infections in focus KumbIT

How strongly does SBR influence yield, quality and profitability? Infestation-free and infected stands are compared directly. Net cages make visible what differences even a few planthoppers can cause. In addition, the role of secondary infections such as rhizomania and *Cercospora* is classified.

6 Monitoring & Role of Official Advisory Services DLR & RP Gießen

This station shows the role official advisory services play in monitoring the planthopper and in assessing the regional infestation situation.

7 Insecticides & model region

Südzucker & Kuratorium für Versuchswesen & Beratung im Zuckerrübenanbau

Current trial approaches for planthopper control are placed in the context of the model region. The focus is on experiences, regional observations and the question of which strategies can support practice in the future.

FIELD MAP SUGAR BEET



Overview of stations and demonstration areas

1

**Practical approaches
in the field** KUMBIT



2

Agro Reel System
BSE YMOND BV



3

Variety trials
ARGE



5

EffectorSelect
IFZ Göttingen

6

**Monitoring & Role of
Official Advisory Services**
DLR & RP Gießen

4

**Secondary infections
& yield effects** KUMBIT



7

**Insecticides & model
region** Südzucker & Kuratorium
für Versuchswesen und Beratung im
Zuckerrübenanbau

FURTHER INFORMATION AT: WWW.BETASOL.INFO



POTATO

The potato section offers practical insights into how Bacterial Potato Tuber Wilt (BPW) can affect yield, quality and utilisation. The focus is on questions relevant to farming practice and processing: How can crops be protected, quality losses minimized, and yields stabilized? Multi-year field trials, variety comparisons as well as netted and open-field variants provide a compact insight into current findings and possible strategies for table potatoes, processing potatoes and seed potatoes.



WHAT TO EXPECT

1 Planthopper management in small-plot trials KARTOZIK

KARTOZIK shows in a practice-oriented way how varietal differences in table and processing potatoes are investigated in the field. The focus is on small-plot trials, modern trial technology & the question of how Bacterial Potato Tuber Wilt affects processing properties. Important quality characteristics are illustrated and classified.

2 Three-year field trials SIKAZIKA & KUMBIT

How do different planthopper intensities affect the yield and quality of potatoes? Based on multi-year trial results, flight patterns from 2023 to 2025 as well as gross and net yields of six table potato varieties will be presented. In addition, HOWITEC provides insight into the net cages used to specifically investigate infestation intensities.

3 Approaches to reducing BPW in the field stand TH Bingen

TH Bingen presents practice-oriented measures to reduce bacterial potato tuber wilt in field crops. Mulching methods, biostimulants, undersown crops between the rows and crop rotation trials in potatoes will be discussed. Here you will learn which cultivation measures have potential to make stands more resilient and reduce infestation pressure.

4 Effects of BPW on ware and seed potatoes

The effects of bacterial potato tuber wilt on potatoes are diverse and vary in importance depending on their intended use. In table potatoes, depending on the variety, increased problems occur with yield and internal quality. The infection also affects the growth and yield potential of seed potatoes, which can be problematic in seed production or farm-saved seed potatoes.

5 Biostimulants and future mitigation approaches Agrarservice Hessen-Pfalz GmbH

Initial approaches with biostimulants will be presented and placed in the context of future strategies. The aim is to discuss possible components for stabilizing crop stands and to show new ways of dealing with bacterial potato tuber wilt and planthopper infestation. You will gain an early insight into new approaches that could become part of integrated management in the future.

6 Detection of bacterial vegetable wilt & vector monitoring Bioland e.V. / LTZ Augustenberg

Gain practice-oriented insights into the spread of bacterial vegetable wilt and current findings on the occurrence of potential vectors in vegetable production. Damage and symptoms in various crops will be presented, as well as initial approaches to better classify and reduce infestation pressure and disease risks in the future.

FIELD MAP POTATO & VEGETABLES



Overview of stations and demonstration areas

2

Three-year field trials

SIKAZIKA und KumbIT



4

Biostimulants & future mitigation approaches

Agrarservice Hessen-Pfalz GmbH

5

Effects of BPW on ware and seed potatoes

SIKAZIKA



1

Planthopper management in small-plot trials

KARTOZIK



3

Approaches to reducing BPW in field stands

TH Bingen



6

Detection of bacterial vegetable wilt & vector monitoring

Bioland e.V. & LTZ Augustenberg



02. SEP. 2026

PROGRAM

OF THE BETASOL CONFERENCE

The BetaSol Conference is the scientific highlight of the forum. High-level expert presentations, international perspectives and a panel discussion spanning the entire value chain bring together current findings and provide clear orientation for research, practice and politics.



8:30 A.M.



REGISTRATION



WELCOME & INTRODUCTION

- **Chairpersons / Moderators: Dr. Christian Lang and Helen Pfitzner** · Agrarservice Hessen-Pfalz GmbH & Verband der Hessisch-Pfälzischen Zuckerrübenanbauer e.V.
- **Impulse from Rhineland-Palatinate and Hesse: Christine Schneider** · Minister for Agriculture, Viticulture, Environment and Forestry, Rhineland-Palatinate, and **Daniel Köfer** · State Secretary at the Hessian Ministry of Agriculture and Environment, Viticulture, Forestry, Hunting and Home Affairs.



PERSPECTIVES FROM ASSOCIATIONS AND INDUSTRY

- Statement from European sugar beet and potato associations:**
Romans Vorss · EUROPATAT – European Potato Trade Association
Juliette-Marie Margueritte · EUPPA – European Potato Processors' Association
Alexander Krick · CIBE – International Confederation of European Beet Growers
- **Statement from the hosts: 7 years of planthopper research for practice — findings and perspectives** · **Anna Dettweiler** · Agrarservice Hessen-Pfalz GmbH & Verband der Hessisch-Pfälzischen Zuckerrübenanbauer e.V.



EXPERT PRESENTATIONS



- **Current status of planthoppers, pathogens, and host plants –**
Natasha Witczak · Julius Kühn Institute, Institute for Plant Protection in Fruit Crops and Viticulture, Siebeldingen, and Agrarservice Hessen-Pfalz GmbH
- **Differentiation of 16SrXII subgroups A and P of *Candidatus Phytoplasma solani* –**
Prof. Dr. Michael Kube · University of Hohenheim
- **New planthopper – new threat? *Reptalus quinquecostatus* in Austria –**
Matthias Wernicke · AGES – Austrian Agency for Health and Food Safety
- **Fastidious pathogens infecting sugar beet and potato in the Pannonian Plain –**
Dr. Bojan Duduk · Institute of Pesticides and Environmental Protection, Belgrade, Serbia
- **Crop-associated planthopper vectors drive *Candidatus Phytoplasma solani* epidemiology –**
Dr. Andrea Kosovac · Institute of Pesticides and Environmental Protection, Belgrade, Serbia
- **From research to practice: Plant protection at the JKI in dialogue between politics and agriculture –**
Dr. Johannes Hausmann · Julius Kühn Institute (JKI) – Institute for Plant Protection in Arable Crops and Grassland
- **Timing is everything! How infestation timing and insecticide application influence yield –**
Dr. Henning Ebmeyer & Dr. Carsten Stibbe · KWS SAAT SE & Co. KGaA
- **SBR – how far has science come, and what benefits can be expected in practice? –**
Dr. Omid Eini und Dr. Mark Varrelmann · IfZ – Institute of Sugar Beet Research, Göttingen
- **Evolutionary ecology and sustainable control of the planthopper *Pentastiridius leporinus* –**
Prof. Dr. Andreas Vilcinskas · Fraunhofer Institute for Molecular Biology and Applied Ecology IME, Gießen
- **Impacts on the quality, processing and utilization of potatoes and sugar beet –**
Hendrik Göbbels · Agrarservice Hessen-Pfalz GmbH and **Hannah Adam-Schilling** · Verband der Hessisch-Pfälzischen Zuckerrübenanbauer e.V.





PANEL DISCUSSION

Impulse for the Panel Discussion: Situation in Plant Protection: PD Dr Hinrich Snell · Head of Division 733 "Plant Protection, Plant Health" · Acting Head of Sub-Directorate 73 "Agricultural Production, Horticulture" · Federal Ministry of Agriculture, Food and Regional Identity (BMLEH)

Discussion of central conference topics, results and the political framework with representatives from:

- **SCIENCE** – **Prof. Dr. Andreas Vilcinskis** · Fraunhofer Institute for Molecular Biology and Applied Ecology IME
- **PRACTICE** – **Walter Manz** · Sugar beet grower, Chairman of the Verband der Hessisch-Pfälzischen Zuckerrübenanbauer e.V.
- **POLITICS** – **Isabel Mackensen-Geis** · SPD Parliamentary Group · Member of the Committee on Food and Agriculture · Deputy Spokesperson for Agriculture, Food and Regional Identity & **Johannes Steiniger** MdB · CDU/CSU Parliamentary Group · Spokesperson for Agriculture, Food and Regional Identity
- **INDUSTRY** – **Dr. Paul-Martin Pfeuffer** · Verband Süddeutscher Zuckerrübenanbauer e.V.
- **TRADE** – **Manfred Dressler** · res naturae QSV GmbH and Potato grower
- **DOWNSTREAM INDUSTRY** – **André Nadler** · Burgis GmbH & **Max Müller** · Kartoffel-Centrum Bayern GmbH



CLOSING

Summary of the most important findings and outlook.

5:00 P.M.

CLOSING



WHY YOU SHOULD ATTEND



International expertise



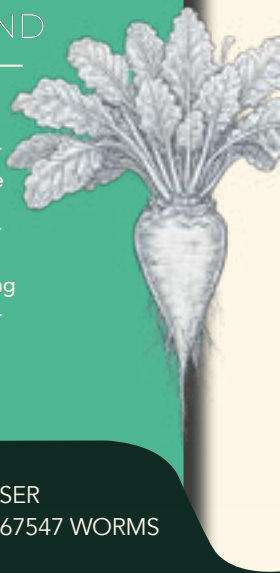
Politics, practice and science in direct dialogue



Current research with direct relevance for decision-making



Simultaneous interpretation available in English



DATE:
02. SEP. 2026



LOCATION: DAS WORMSER
RATHENAUSSTRASSE 11 · 67547 WORMS

DISEASE & PATHOGENS



PATHOGENS:

- *Candidatus* Phytoplasma solani (Stolbur phytoplasma) (EPPO: PHYPSO*) comprises multiple genetic strains; however, two subgroups (Ca. Phytoplasma solani 16SrXII-A, Stolbur-related strain 16SrXII-P) are considered most relevant in the disease epidemiology.
- γ -Proteobacterium *Candidatus* Arsenophonus phytopathogenicus (ARSEPH) in sugar beet, potato and onion, EPPO: ARSEPH.



DISEASES AND TERMINOLOGY:

Phloem Pathogen-Associated Wilt Syndrome (PAWS) comprises the following crop-specific diseases, which are consistently associated with ARSEPH and may optionally involve PHYPSO (Pfitzner et al., 2026):



Syndrome Basses Richesses (SBR-complex) in sugar beet is always associated with ARSEPH and optionally with PHYPSO. Known vectors are *Pentastiridius leporinus* (16SrXII-A; 16SrXII-P) and *Reptalus quinquecostatus* (16SrXII-A; 16SrXII-P (in Austria)) (Kreitzer et al., 2025).



Bacterial Potato Tuber Wilt (BPW), also known as Bakterielle Kartoffelnollenwelke (BKW; in German), is always associated with ARSEPH and optionally with PHYPSO in potatoes. Known vector is *P. leporinus* (16SrXII-A; 16SrXII-P).



Bacterial Vegetable Wilt (BVW) is always associated with ARSEPH and optionally with PHYPSO in vegetable crops. Known vector is *P. leporinus* (16SrXII-A; 16SrXII-P).



SYMPTOMATICALLY SIMILAR DISEASES:

- Stolbur disease in potato is associated with PHYPSO only, and the vectors are *Hyalestes obsoletus*, *Reptalus panzeri*, and *R. quinquecostatus*.
- Rubbery Taproot disease (RTD) is associated with PHYPSO and sugar beet only, and the vectors are *H. obsoletus*, *R. panzeri*, and *R. quinquecostatus*.



PHYPSO corresponds besides others to subgroup 16SrXII-A; however, conventional and quantitative PCR assays based on standard, commonly used primer systems do not allow discrimination between the two closely related subgroups which are A and the newly identified Stolbur-related strain 16SrXII-P (Duduk et al., 2023; Toth et al., 2025). Here, PHYPSO is therefore used as a general term, without differentiation between subgroups.

Duduk B., Čurčić Ž., Stepanović J., Böhm J.W., Kosovac A., Rekanović E., Kube M. (2023): Prevalence of a '*Candidatus* Phytoplasma solani'-Related strain designated as new 16SrXII-P subgroup over '*Candidatus* Arsenophonus phytopathogenicus' in sugar beet in Eastern Germany, *Plant disease* 107 (12), 3792–3800; DOI: 10.1094/PDIS-04-23-0613-RE

Kreitzer C., Stepanović J., Stanojević N., Rohringer A., Seiter M., Rekanović E., Duduk B. (2025): Dominant cixiid vector and transmission of '*Candidatus* Arsenophonus phytopathogenicus' and '*Candidatus* Phytoplasma solani'-related strain 16SrXII-P in sugar beet in Austria, *SciRep* 15, 22526; DOI: 10.1038/s41598-025-07035-0

Pfitzner H., Dettweiler A., Kaufmann T., Adam S., Stohl J., Adam-Schilling H., Löffler D., Benaouda S. (2026): *Pentastiridius leporinus* as a plant disease vector: Updated insights, emerging challenges, and research priorities, *Sugar Industry International* 151 (6), 461–471; DOI: 10.36961/si34841

Toth R., Huettel B., Varelmann M., Kube M. (2025): The 16SrXII-P Phytoplasma GOE Is Separated from Other Stolbur Phytoplasmas by Key Genomic Features, *Pathogens* 14, 180; DOI: 10.3390/pathogens14020180



DEVELOPING PRACTICAL SOLUTIONS TOGETHER

The BetaSol Forum thrives on a strong network of research, practice, industry and associations. Together, we are shaping sustainable strategies for the future of crop production.

PARTNERS & EXHIBITORS



BETASEED. SIMPLY DIFFERENT.



An Agricultural Sciences Company



STAY INFORMED!

Receive current information on the program, speakers and registration directly.